THE ORIGINAL

SCIENCE FICTION

STORIES

144 PAGES

35¢

MARCH

SATURNALIA

by Randall Garrett

FRENCH COURSE OF GREAT HELP TO COLLEGE STUDENT

"Your Course was a very great help to me in Quebec this summer. In college the emphasis is primarily on literary French with little conversational practice. I will certainly recommend your Course to my classmates." —Gilbert De Simone, Valley Forge Road, Devon, Pa.

LINGUAPHONE MAKES IT EASY TO LISTEN and LEARN to *Speak*

LINGUAPHONE OF UTMOST VALUE IN TRAVELS

"I obtained the Linguaphone Spanish Conversational Course. Needless to say, we found the Course of the utmost value in our travels, and are reviewing the lesson material before leaving for Mexico." Gilbert L. Macpherson, Pleasant Corners, Old Lyme 3, Conn.

SPANISH (AMERICAN or EUROPEAN)

FRENCH • GERMAN • ITALIAN

JAPANESE • RUSSIAN • MODERN GREEK

any of 34 languages available for

Free Trial at Home

With LINGUAPHONE—The World's Standard Conversational Method—You Start to SPEAK another language TOMORROW—or IT COSTS YOU NOTHING!

A knowledge of "another" language is invaluable for cultural enrichment, and broadened experiences. It has measurable dollar value, too, for getting ahead in business, and when traveling. Best of all, Linguaphone invites you to "TRY —not buy" — "another language"—Right AT HOME.

Linguaphone Is The Easy, Natural Way To Learn

For just 20 minutes a Day you listen to Linguaphone's Modern. Life-Like Recordings. It is easy AND FUN—to learn another language AT HOME by LINGUAPHONE—the same natural, conversational way you learned to speak English long before you went to school.

Only LINGUAPHONE brings the world's best native language teachers into your home.

You hear 8 to 12 outstanding native speakers, both men and women converse about everyday matters. They speak in their native tongue with a 1957 vocabulary. YOU understand—You SPEAK correctly as they do. It's like living in another country.

Exciting Business, Travel, Cultural Opportunities At Home and Abroad

Approved by departments of education of 14 countries. Chief supplier of language teaching courses to UN (Personnel Dept. and Library). Used regularly by 18,000 schools, colleges, universities. More than a million home-study students of all ages have learned another language this ideal conversational way.

For duplicate coupon turn to page 000

Send or call today for Free booklet, "Passport To A New World," describing the conversational method; also details on how you may obtain a COMPLETE Course-unit in the language you choose on FREE TRIAL. **Linguaphone Institute, T-82-037 Radio City, N. Y. 20. CIrcle 7-0830.**

LINGUAPHONE INSTITUTE

T-82-037 Radio City. Phone CIrcle 7-0830
New York 20. N. Y.

Please send me: ☐ Free book ☐ Details on Free Trial. No obligation, of course.
My language interest is.....
Name.....
Address.....
City..... Zone..... State.....

World's Standard Conversational Method For Over Half a Century

SEND FOR FREE BOOK

THE ORIGINAL
SCIENCE FICTION
STORIES

35¢
Volume 7
Number 5
March, 1957

NOVELET

SHORT STORIES

FEATURE

DEPARTMENTS

Editor: ROBERT W. LOWNDES MARIE A. PARK, Asso. Ed.
COVER BY EMSH DOROTHY B. SEADOR, Asso. Ed.
Illustrations by Emsh, Freas, and Orban

SCIENCE FICTION STORIES, March, 1957, published bi-monthly by COLUMBIA PUBLICATIONS, INC., 1 Appleton Street, Holyoke, Mass. Editorial and executive offices at 241 Church Street, New York 13, New York. Entered as second class matter at the Post Office at Holyoke, Mass., under the act of March 3, 1879. 35c per copy; yearly subscriptions $2.10. Printed in the U. S. A.

I couldn't tell if she was still smiling enigmatically as I broke for the front door. But I knew they expected me to exit via the store-room!

SALT LAKE SKIRMISH

Novelet by RICHARD ROYALE

illustrated by EMSH

Breathes there the man who doesn't know what a hamburger steak is? This apparently cultured gentleman didn't, and that was the first clue that something very peculiar was going on beneath the surface of routine chemical anaylses at this Salt Lake laboratory.

SALT LAKE CITY is one hell of a lonely town—especially when someone is trying to kill you.

Apparently, my luck was all bad that May. First, I'd drawn the short straw and dirty end of the stick, and I was the one they'd picked to go on the Salt Lake assignment. I don't really know why—we had plenty of new analytical chemists in the lab who'd not been to Salt Lake, and I'd already served a ten week sentence in that Zombie Village the year before.

If that wasn't bad enough, I walked into the lab the Friday—why is Friday always so miserable a day?—after I'd arrived, and the Chief Chemist greeted me with, "Hope you like shift work, boy. You go on graveyard tonight at midnight: we're starting the sulfate-demand runs."

"Wait a minute," I answered, taking an instant dislike to the man, "what about the spectrophotometer? You know I've been calibrating the Beast for the methylene blue dilution."

"Oh," he said with a nasty grin, "you can finish that up today."

"And come back at midnight?"

"And come back at midnight. You know, you're going to be tired by eight o'clock tomorrow."

The Chemical Business is like that.

ANNOYED, I stamped into the reception room and began complaining to Dot. Dorothea Van Fleet—which you'd swear was a made-up name—was one of those women who make men stop and stare in Shanghai, Paris, or—yes—even Hollywood.

The first thing you notice about her is her eyes. They are great big almond-shaped jobs. Disproportionately so, perhaps—but they add to, not detract from, her fascination. Those eyes are blue, but not the usual hue; they are more the color of the algae hot springs at Yellowstone.

Her round face is set off by short, red—auburn, really—hair, and she wears unobtrusive bangs on the left side of her forehead. High cheekbones and color high up on them. A stub nose is the only thing that doesn't fit.

Her overall general effect was (4334), which is not a Miller Index for a form in the hexagonal crystal system, but my own personal index for a form approaching perfection in the human system.

Dot was r e c e p t i o n i s t, board operator, and secretary, and she was well placed to meet the public. It was hard to concentrate on chemistry when by stepping out of the lab, I could be watching her. But then, I'm partial to receptionists, switch-board operators, and secretaries.

I blew off steam to her about working two shifts out of three. After I'd ranted a while, she reached into her desk, came up with a kleenex, and began dabbing at my eyes. I shut up and retreated in confusion.

Dot told me she'd be working the next day, Saturday, and without overtime, too; she had some bills of lading to clean up. At first I was resentful—it seemed that I was being reproached. But on further reflection, and now I often wonder whether it was wild rationalization, I thought there might have been a hint of invitation present, too. I went back to work, wondering.

IT TURNED out that the Chief Chemist was right, as —I hate to admit it—he usually was: I was tired long before I finished the graveyard; and sleepy.

Let's see: yeah, it was about 10 PM. I'd figured I'd better wrap myself around a couple of gallons of black coffee, hopped into the car, and began driving through a rainstorm of fantastic propor-

tions. (Weather report: it had been snowing when I arrived. For a few days the sun had even been out. But now the rain, a pip of a rain. And all this nearly in June. Anyone want to buy some real estate cheap? You can have my share of Utah.)

Looking back at the occurrence now, I can certainly understand it. It didn't make sense then, especially since it was so minor. As I say, I drove out of the motel, turned right on Main Street, and pulled up in front of one of those chain restaurants that stays open late to catch the movie crowd. But I didn't go in.

Oh, no. Like a jerk I just sat there in the car, feeling strange. I wouldn't say that I was emotionally disturbed, because the phrase is too strong. It was just a feeling of incompleteness, rather like an itch way down in your ear that you can't scratch. I made three or four efforts to go in and finally gave it up, disgusted.

IT WAS SILLY. I learned a long time ago that the worst possible thing I could do was put off making decisions —whether right or wrong— and there I was, trying to make up my mind about a crummy cup of coffee. (And I use "crummy" advisedly. The city was well named because there is salt everywhere; you even get it in the water. And just you try to enjoy some coffee that tastes salty.) I figured I must be sleepy if I couldn't make up my mind over something that simple; so I U-turned and drove on up to that all-night hamburger joint on the corner of Fourth South.

This was a lot easier. In fact, it seemed appealing, and it struck me at the time that something was happening to my sense of discrimination when I rejected cloth napery for a dirty counter and the smell of stale grease.

What got me, though, was my attitude. I had a feeling that the place was an old friend, with the consequent comfort that old friends give. I'd never been in there before, but I felt as though I knew the layout and cast of characters.

I was right. The scene inside when I opened the door was one that's being replayed over all the country, even right now. It was a long counter affair, swivel-stooled, with a mirror stretching the length and paralleling it. Above the mirror were the signs proclaiming the establishment's raison d'etre: *Jumbo Hamburger...$0.45; French Fries ...$0.15 ($.010 with order), Ham and Eggs...$0.70, and* the rest of the usual assortment. Chalked over the mirror, about half way along, was the day's special: *Hamburger Steak* 60¢ which angled from lower left to upper right

—a mighty attempt to use all its wiles in attracting the unwary. Above the cash register to the right, hung crookedly, was a blue placard with gold lettering. It said that the finest people in the world came through the door—the customers.

It was so blasted commonplace that I wonder if they didn't make the first mistake right there.

SEATED nearest the door was a guy who needed a shave—the kind of person who always looks as though he is nearly sober, and if he sits there just a while longer drinking coffee, he'll be able to make it home. Hunched over, with an arm thrown way across the counter, his creased face staring vaguely, he set the pattern.

Next in line was a woman sitting stiffly, about two stools down. She was the only one who really didn't fit—at least, not at 10 at night. (That's pretty late for Salt Lake.) Her hair was completely grey, and I judged her to be on the late side of 45.

Seated right in front of the special sign, flirting with the waitress, was the night mechanic from the garage down the street. I mean he big guy with the grease-spotted coveralls that are lettered "*Streator Chevrolet* across the back. It might have been my mood that made me take a dislike to him.

But to tell the truth, I couldn't help sitting down next to him because that put me right in line with the waitress. She, too, was an old friend—but then, I'm partial to waitresses. Overly made-up, and a little hard-looking, but with the kind of figure that the owner hires for night waitress, she simply reinforced by contention that here, in actuality, was the American Girl.

We looked each other over—I wished my bow tie was one of those that lit up to "Oh You Kid!"—and apparently I passed the test; she'd passed mine some time back. She smiled and asked what I wanted.

I figured I didn't know her well enough yet for banter, so I merely replied, "Kupacofy. Blackplease."

ABOUT THEN, another one of the standard characters came in. You've seen him, too. He's on the make for the waitress, doesn't care who knows it, and has the kind of eyes that can look r i g h t through clothing. He calls the woman "Baby," and has a black leather jacket.

S t r e a t o r Chevrolet and Black Leather eyed each other; Leather broke off and sauntered down to the far end of the counter, sliding into a stool and leaning against the wall.

Waitress was torn and sort of fluttered between the two.

After appraising these characters, I lost interest—being sleepy—and began to concentrate on my cup, hardly aware of the flow of conversation, the terribly funny remarks peculiar to the night shift that cause guffaws.

So the next entrance was one that I was aware of only as background noise. Reconstructing, I guess the door opened fairly quickly; he must have hurried down the aisle and sat immediately on my right. I rolled up a sleepy lid, plopped it back down so that it bounced a couple of times, and then did a mental double-take. This one definitely didn't fit; he screamed his peculiarity. A Homburg, neutral shade; a natty brown suit with razor-sharp creases; greying temples, and a cultured air.

WAITRESS moved up and asked the standard question. There was a pause, the kind you always make when you have to order and haven't made up your mind. Only, this one stretched out. And out... and out; even Chevvy noticed and looked up.

"Just one moment, please," he said in a slow way, "I'll like to look with the list of selections."

Waitress backed over toward Black Leather, then changed her mind and went to Chevrolet. I caught his exultant look; and I eyed Black Leather to see the reaction. It wasn't good; you could see his brains groaning around, trying to find some way of offsetting his rival's advantage.

This guy on my right then said, "Uh."

Waitress, who by then had grabbed the wet towel and begun to clean the counter near the woman with the grey hair, asked down the long table, "Have you made up your mind, sir?"

Again there was an interminable pause. *Lord,* I thought, *this one is really slow. Drop the other shoe,* you..."

Finally came the pronunciamento: "What is a...an.. a 'hamburger steak?' "

Lord, can this be? Is there *anyone* who hasn't heard of hamburger steak—except maybe Outer Mongolians or Extra-Terrestrials, both of whom probably have their own term for it. Try Salisbury Steak, ground Sirloin Tips, anything.

Even Waitress was nonplussed. "Why—well, it's like a hamburger sandwich but bigger, and without the bread. Is that what you want?" At his nod, she began frying it.

AGAIN I contemplated my cup. The stuff wasn't much good, but it was warm and would, I hoped, keep me awake. And then, as if by signal, both Semi-Sober and the woman began talking at once. I remember that she asked for more coffee, and I'm not too

sure what he wanted; but the break in silence, coming from that end, made all heads turn.

Ordinarily I would have observed the happening with some amusement, but this night I wasn't my usual bright self; my eyes dropped back down to the cup.

In the polished metal of the juke box selector, I saw the reflection of the oddball's hand stretched over my cup. That crumb had poured most of a small vial of powder into my coffee, and I am enough of a chemist to be awfully frightened of unknown white crystallines.

Angrily I grabbed his hand —it felt sticky-warm and repulsive—and held it right where it was. "Hey, look Mac! What the hell is the big idea? You've administered to the wrong guy." I think I was about to slug him.

But he'd been looking past me while all this was going on, and he nodded. Calm as you please, Semi-Sober and the Grey Lady got up and walked down to us. I was too upset to notice them, but I heard Chevvy's yell, *"Watch it!"* and in the mirror I saw the catsup bottle, which Grey Lady had picked up, swinging in a most efficient curve toward my head.

Reflex made me duck, but I didn't duck far enough. The *thunk* sent me sprawling on my hands and knees, and there was enough force behind the blow so that my chin touched bottom. It hurt like crazy, but I wasn't out. I shook my head to clear it, and I swear I heard something rolling around inside, but I was pretty mad by then. I got up and looked around.

BLACK LEATHER was on his feet, standing immobilized, with his eyes aghast. He looked frightened.

Streator Chrevolet—bless him down to his grease spots —had sent the oddball sprawling with one shove, and he had turned to take care of Semi-Sober—who, incidentally, was no longer Semi—, and was pretty efficient with his fists.

Grey Lady—your mother and mine—had dug into her purse and pulled out a gun which she was pointing towards my new-found ally. I did the only thing I could think of at the moment. I kicked her butt—and I put as much effort into it as I would have had the score been 14-13, their favor, with two seconds to play and us trying a field goal.

It worked; the gun cleared the uprights and landed in section UU over by the door. And we won.

Oddball said something which I couldn't understand, and all three of them broke for the door. And not a gentleman in the crowd—they let Grey Lady pick up her own gun.

I was mad enough to go af-

ter them, but they did have the gun; and judging from what I'd seen, they were not adverse to using it. Instead, I stood there being a little nervous from the reaction and rubbing my head.

"What did you do to them?" Chevvy, obviously one of the world's finest people, was grinning at me.

"Never saw them before," I said, "and hope I never do again. But they sure were working together, and they must have mistaken me for the guy they were really after."

WAITRESS, who looked at Chevvy with starry eyes, asked him, "What do we do, call the police?"

He looked at me and shrugged, and I looked and shrugged back. After all, they had left...

There was some more desultory conversation about what had happened, and I suddenly remembered the time. I left, after making a date for the next evening to buy Chevvy some Utah three-point-two.

(That's all you can get. Don't let the history books kid you about motive. In the mid-1800's, the U. S. and Indian Nations fought a long war of attrition, culminating with Custer at the Little Big Horn. The loser was to get Utah, and the fact they fought it out in South Dakota only shows the intensity of mutual feeling on both sides.)

It wasn't much, but there was one thing my presence had done as repayment to Chevvy. Black Leather had slunk out, leaving the field clear, and from the way Waitress was looking at my buddy, Black Leather would not be back.

II

THE RAIN kept coming down, and I cursed it fervently. I was driving out to Garfield, a small town 15 miles west of Salt Lake, where out plant—Western Fertilizers, Inc.—was located. All of a sudden, some strange thoughts popped into my head, as I began to review what had happened.

When a situation, out of the ordinary such as this one, occurs, you think about it. You can't help it, unless you're Mike Hammer, or Humphrey Bogart, to whom such things happen every day. It shakes you up; your hands twitch a little, and the palms get sweaty. You wonder about motivation.

That's what I'd been doing: idly speculating why one group of people was attempting to drug or poison some character who resembled me. And then the thought emerged to the surface—the one that my subconscious, going round and round in its squirrel cage, had tried to escape. The thought was: *sup-*

pose they hadn't been mistaken in their identification?

I almost let go of the wheel it hit me so hard. I got scared again, for it fit. Sure it did! Victims of murderers aren't cases of mistaken identity except in detective novels. Today's criminal, especially the organized gang variety, is a pretty shrewd cookie who doesn't make mistakes and who doesn't often get caught —despite Joe Friday's propoganda. What was the figure on Cicago's solved murders? Ten per cent, or some such fantastically low amount.

OK, BRIGHT BOY, you're so fond of logical thinking, start with that assumption. They were out to get you. What then?

Paranoia? Could be, but highly unlikely. This *did* happen; it wasn't your imagination. Unless you've really slipped off the deep end. One thing: that knot on the back of your dreamt; somebody did put it there.

Fact: persons unknown trying to remove you for reason or reasons unknown. And what else? You know, don't you? You just won't admit it—

One: oddball wasn't right. Sure, sure, lots of professorial types go into all-night hamburger joints. They have to; they're not paid well enough for anything else. But their presence is certainly out of the ordinary.

Two: What was it he'd said? *"I'll like to look with the list of selections."* You can't tell me that is the patois of the country, even in Utah. And, *"What is a...an ...a hamburger steak?"* Ignore the question for the moment and concentrate on usage. Only a man who's unfamiliar with the language would stumble over an article. The native may use the incorrect one (rarely), but he never is uncertain about it. Obviously, this person wasn't British and he wasn't American, but he had no particular accent!

Three: Grey Lady's gun. You've been ignoring that little item, haven't you? The particular rationalization was simply that you knew nothing about pistols. But a gun is a gun, and the European models have more features in common with outs than not. This pistol was...odd.

Four: Another rationalization, if you've ever fooled yourself with one. You claimed you couldn't understand what oddball had said to the other two because of the excitement of the moment when they broke and ran. Now face it: you didn't understand because it was in a foreign language, and it wasn't one of the major terrestrial tongues!

ADD 'EM UP, Bright Boy. Each fact, by itself, strange but within the bounds

of reasonable explanation. Four of 'em put together strains a house-of-cards structure too much.

They're alien.

Well, you've known that...

You know what I mean: extra-terrestrial, offathisEarthers, little green men.

Wait a minute! Granting for the moment that you have one alternative among others that seems logical, if they are after you—then another attempt will be made. You'd better be ready for it, and you'd better know how to face it. You're going to feel like a damn fool if they turn out to be just plain old common murderers. And even more important: if you treat them as e-t's, preparing along those lines, and they're not, you not only will feel like a fool, you'll be dead. Now what are they?

Little green men...

IN SPITE of the acre-feet of water falling from the heavens, my throat was parched. I found I'd bitten through my pipe stem, and the gadget wasn't drawing very well. This put me in even a better mood. Nervous, and now frustrated: I was drawing on that pipe like a newborn calf going after cholesterol.

And to top things off, I suddenly had to hit the brakes, I came up on the car so fast. I muttered my favorite imprication "Utah Driver!" and swung past.

That was another gripe of mine: they were all so blasted slow. There was U. S. 40, a beautiful, flat, straight highway going west, and these guys tore along it at 35. Being a California driver, I knew it screamed for 70 at least.

But they're all crazy and slow—the whole blasted State. Crazy and slow, the population. The sales personnel, the merchants. By the time a gal says "Yes," her swain has died of old age, and to that you can attest, can't you? Crazy and slow, just like the oddball...

Ulp!

All of 'em? No, it couldn't be—still, what had Chad Oliver written in "Shadows in the sun?" Wasn't there a whole town taken over?

Chad, you don't need a small town in Texas. I'll give you the biggest one between the Coast and Denver. C'mon out and look the field over: This may be another question of comparative culture. And look fella, I'm sorry I started that argument with you about fossil man, and I sure could use another six foot ally, and —Ahh, knock it off. You're just having a reaction. Obviously if they were in numbers anything other than very small, you would be dead already.

THEN I CAME to that bend in the highway just northerly from Saltair

Amusement Park. The Park is on the shore of the Lake, quite a way from the main highway. And while the grounds are closed all winter, the road leading onto them isn't; consequently, that side road is a wonderful place to run out of gas. Business was booming this night, in spite of the rain. My headlights picked up the cars, the cluster of two-membered Strength-Through-Joy clubs. I grinned: here was normalcy that took my mind off the recent events. I relaxed and a nice peaceful feeling took hold.

I was so busy grinning like an ape that I didn't notice the car parked on the opposite side of the road. It suddenly came shooting out to the center line, describing a sine curve past me, and went tearing back toward the city.

I guess. I didn't have time to notice. I thought I saw a flash of Grey Lady, but that may have been reconstructed memory. What I do know is as that sedan tore by, I heard two loud pops. My left front and left rear tires had blown!

THE CAR dropped and swerved left out of control. I remember very clearly that my conscious thought was to keep away from the brakes, for I had been doing 70 on a wet and slippery surface. I tried to steer into the direction of the skid, but something happened. The rear end suddenly came skittering around, and I went into the cutest, tightest spin you ever saw. A bit more and I would have risen into the air like a helicopter.

Naturally, I couldn't hold the road, so the car and I went off the shoulder. We ploughed through a mess of sagebrush, bounced along, and I was praying that she wouldn't roll. For some reason she straightened and shot ahead up a small sand dune. Only, there wasn't quite enough momentun—so she went off to the side and balanced momentarily. Then slowly, almost insultingly, deliberately the right side dropped. I saw a dune describe a circle right before my eyes, and I had the terrible feeling that I was in the grip of force over which I had no control.

I hadn't—and it just goes to show that sometimes prayers aren't answered, either. I was stretched out on what used to be the roof, the steering column dangling down, above and over me. My first thought was that I had rolled and, since I couldn't move, it must have been some sort of neck injury.

But it was only the steering wheel, under which my shoulder was pinned. I managed to get out, more mad than anything else. I thought, *You stupid dolts! Another hundred yards down the road was where the fill was. The high-*

way is elevated about ten feet off the desert floor. That's where you should have tried it.

By then the shock had set in, so I stopped being mad and concentrated on being sick.

ONE OF THE other cars approached. It left the side road, and came straight across the desert to where I stood, gazing at the wreck.

"You all right, mister?" the driver asked. Both he and the girl looked pretty young to me, but I was in no position to be choosey about who was tendering aid.

"Yeah, thanks."

"What happened?"

"Blowout."

"Boy, they sure did!" The kid had seen what I knew had happened when I lost control, both tires were gone. He looked puzzled: it occurred to him that it is rare when both front and rear blow simultaneously with enough force to take the tire off the wheel. Then he grinned through his second-hand lipstick, commented that I was lucky to be alive, and offered his help.

I wanted two things: a lift to the plant, which was only a mile or two away, and for him to report what had happened to the State Police—if he could find them. He readily agreed, but before we even got back to the highway I had a third request: I wanted him to stop so I could inspect one of the tires I spotted lying in the sage brush. The tire gave me the shakes, for one whole hunk of it had been sheared clean off. The kid thought it was from the blowout, but I've never seen a blowout that had no ragged edges, that looked as though it had been vulcanized with a cut-away section in it.

III

I GOT TO the plant without further mishap, and by then I was beginning to feel lucky that I had. Twice in the space of an hour was a little too much to take. Fortunately, a sort of numbness began to set in, and I was able to contemplate the various steps leading to my attempted removal with detachment, though not calmly. And don't think I didn't look that kid and his girl over pretty carefully. Not that I could have told anything by just looking, but I felt better for doing so.

Still, I'd had two things pointed out to me with quite a bit of object. It was now obvious that I *was* the target for tonight—which, though unpleasant to face, removed some of the uncertainty. The second thing was that I had relaxed too much. After deciding that I must be careful—almost immediately after—I nearly succeeded in getting myself killed, and it was only fortunate happenstance that I was still alive. I wondered about the next go-round.

I changed and went over to the plant lab in the filter building. The operator and his helper were up there, and the company had given me a helper: I recognized him; he was one of the plant men I'd worked with on my last trip. Good, bright fella, that Danny Kieth.

So bright that *I* was able to run through the sulfate-demand routine once, and he got it—which pleased me, because I didn't want to be running it all night. I was much more interested in crystal growth. One of the unpleasant by-products of our phosphoric acid was gypsum, and the size of its crystals determined the degree of unpleasantness. I left Danny with the demand test, and climbed up on the storage tanks to get some slurry samples.

THE RAIN had at least stopped, and this elicited a grunt of approval from me. Those tanks were 30 feet up, with no guard rails, and slippery. I remembered having skidded around on them fourteen months previously, when they were covered with snow. Still, the obvious didn't dawn until I'd collected my third sample. I realized that I was in a very vulnerable position; yet it is awfully hard to keep in mind that, wherever you go, at any time, someone may be about to kill you. Your mind keeps running before the fact.

The night was dark and cloudy. The plant was ill-lit, at least for my peace of mind. Here and there, dim electric bulbs sparkled their reflections off the wet pavement. Yet it wasn't bright enough; someone could have been inching their way towards me along the overhead pipelines. *Was* someone? I peered into the gloom, staring. There was a drip somewhere, excess water draining from some low place. It beat out a steady *thump... thump... thump.* Or were those footsteps?

Across the way, the filter building rattled out its message of production and, lit up as it was, it presented the only cheerful spot for great distances. I don't know how many times I've cussed out the noise, the skull-splitting rattling which deafens you when you're actually inside; but right then, the filter building seemed a highly desirable location.

I had nothing positive to go on; just a familiar eyes-on-your-back sort of thing. I was ready to swear I was being w a t c h e d—and p o s s i b l y stalked. Only this time I was ready for it, so I continued to take the samples, waiting tensely. The one thing that really worried me was the thought of that gun.

ANTICLIMACTICALLY, nothing did happen, and on that basis I had an idea.

They could have gunned me down before I went into the eatery; they could have done the same out on the highway. The fact that they didn't suggested to me that my death was supposed to look accidental. Then, too, it also seemed that Grey Lady was going to use that gun only because they were in danger; perhaps they weren't so trigger happy.

And I gained my first advantage of the night. I would be OK as long as I didn't put myself in a spot where a safe could drop on me. Of course, I had no idea of how desperate they were, or to what lengths they would go if there was a time limit on my demise; but for the moment, I thought I had them checked.

I still had to get off those tanks, however. I did so, with every sense straining; it was much too good an opportunity for them. But I made it, and headed back to the main lab, clutching my samples.

After getting all the equipment ready, and filtering and washing the slurries, I chucked them in the oven to dry. I was feeling queasy again; the lab at night was a lonely place, at best. Where during the day there was bustle, at night there was echoing silence. Water dripped from leaky faucets; it does in laboratories. The hot plates creaked, and every once in a while the water cooler, thermostatically controlled, would wind up and sing to itself in a bass voice.

I figured I'd better go see how Danny was doing; it would be a while yet till the samples of crystal dried. It was still black outside, but it seemed that the sky was clearing. The filter building winked cheerily at me, like an illustration of a house in the Oz stories. I began to perk up. It had been some hours since an actual attempt had been made; and after all, the gates were locked, so how could those three goons get in? Maybe they had given up ...but I swerved away from that thought as soon as it came. I knew that I'd be quickly dead if I accepted it without evidence.

INTO THE building I went, past the boilers, the pumps, and the concentrators, each wailing its own particular whine of cacaphony, the whole attended and led by the filter table fifty feet overhead. Water in the hot-wells boiled and splattered, and in the vertical piping, converted to steam, threw itself joyously heavenward, no longer earthbound. On the way up, it banged like an irate tenant who isn't getting any heat.

Up the steps I went, making the long climb to the second floor where the plant lab was. The table dominated that

floor, creaking slowly around, and oblivious to all the complaining from below; indeed, like Alice's Duchess outroaring the baby, it simply made more noise.

Danny was outside the lab room, one foot on the railing of the twenty foot square well that opened onto the bottom floor. The well came in handy when you had to hoist big equipment upstairs. He seemed surprised to see me.

"How you been doing, keed?" I asked.

"Pretty good," he nodded, "and you? Got anything on the crystal yet?"

I shook my head, adding, "Just getting her set up," and went into the lab to take a look at his log. It seemed OK, so I went back outside, put a foot up on the railing myself, and the two of us stood there, silently staring off into space.

THEN THE alarm went off: that strident horn that cuts through all the rest of the noise with an incessant note of urgency. Danny stepped inside the room, and turned it off. I caught a momentary glimpse of the operator and his helper hurrying outside towards the digestors, and then Danny was back. He hooked a thumb in the others' general direction and half-grinned. "They've been having trouble with the Richardson scale all night. She keeps plugging."

I nodded—conversation was difficult in there, being carried out at the top of the lungs—and we resumed our front-of-the-drugstore stance.

Finally I shook my head rather doubtfully. "That certainly is a long drop, but I don't know if it is any longer than the climb up here."

He shrugged noncommittally and turned back to the lab. I heard him change the subject, muttering, "2 AM; 3 hours to daylight" but I wasn't insulted. My conversation had been nothing to write home about. I wasn't doing much good there myself, so I returned to the main lab, hoping the crystals were dry. They were.

The polarizing microscope was in the weighing room, right next to my equipment with which I'd been calibrating the photometer twelve hours—was it really only half a day?—before, and this made things handy In manner most unscientific, I grabbed a pinch of the first sample, dropped it on a slide, dolloped up some Canada Balsam on a stirring rod and let the viscous gunk spread over the gypsum crystals. Finally I clapped a cover glass over the mess and inserted it into the mike.

With the Nicol prism in, I got a few off-centered interferences figures. Lovely things, with a terrific spread of color. This was more like play than work; but it was work that I had to settle down to, so I began.

IT MUST have been close to two hours later when I started working on the last sample, the one from tank E. I went through the motions, inserted the slide, and came up with one of the finest centered biaxial figures I'd ever seen. It was really a beautiful specimen, and I intended to keep the slide for show. I never had a chance to do so.

The figure suddenly began to fade. Eyestrain from a microscope is a pretty common occurrence, so I blinked a few times and looked again. More of it was gone. Then I checked my light source, but it was bright and steady as ever. Something was haywire; I took the Nicol out and examined that particular crystal under high power.

I was, putting it mildly, surprised. No implications yet, no thoughts, just one datum: the crystal of gypsum was disappearing—literally disappearing under my eyes.

I'd seen crystals of various sorts forming from solutions, but this was my first experience with the reverse process. I waited until it had gone completely, then checked with the prism again. Black. Nothing there. Nothing? This was ridiculous!

Trying another slide from the same tank, I got similar results. The puzzle was beginning to be more than that; a little twinge of morbid excitement was beginning to gnaw at me. In some respect, this "ungrowth" might be connected with my three playmates. I was about to prepare another slide, when I was struck by an idea. I took the rectangular hunk of glass and its cover and tare-weighed them on an analytical balance. To four places. Laugh, but I wanted to be certain, and that fourth place was the weight of a pencil mark—if you used soft lead. Again I made up a slide, weighed it, and set it into place.

For some reason, the thought of Danny popped into my mind. I realized that I hadn't checked with him for some time, and while I felt it was my job. Besides, the thing on the slide couldn't wait.

THE SKY was beginning to turn a rosy pink off to the east, brightening the area above the Wasatch range immediately behind the city by the lake. I hurried along the walkway, towards the filter building, with little patience. The lights were less effective now, what with daylight coming on.

I checked the plant lab; Danny wasn't there, but his records were. As I'd expected, he'd been getting good results every half hour when he ran them. No question about it: he was good. Taciturn, unemotional, but good. Far too good to be stuck where he was.

I found him about where

I'd left him, looking down the well. Much as I liked him, in view of what had happened to me this night, his concern with that bloody well was getting on my nerves. A man could get hurt if he ... fell through that opening.

WITHOUT turning his head, Danny asked "How're the crystals coming?"

"Literally damndest thing I've ever seen." Unconsciously I fell into the clipped style of speech. "They're disappearing" — I could have bitten my tongue, for I hadn't intended to tell anyone just yet — "and I can't figure why."

Danny digested that a minute and mulled it over. Then he said, "Maybe that's the reason for the queer reaction on the filter table."

"What queer reaction?"

"Come on, I'll show you." He walked quickly around the well and up the short flight of steel stairs to the catwalk overlooking the filter table. "Check the cake," he said.

I leaned over, peering at each of the filters, just before it was dumped. "Don't see anything queer," I said, "still the same dark crud—"

I was cut off by the jarring screech of the alarm horn. It got everyone, and no matter how often in the past I'd heard it, I still jumped. Whatever it was, it was big because suddenly every light in the building cut out at once! No power failure—the rest of the equipment continued to bellow and run. The table creaked its endless rounds; the pumps hummed and supplied their measured quantities of wash-water; on the floor below the boiler roared, and fire from the hot box threw flickering shadows up the well, providing a dim light.

I was conscious of all this in far less time than it takes to tell; it was a gestalt effect. And I was conscious of something else, too. A feeling of peace—and I'd had that twice before that evening, twice when I should have been on the alert instead of relaxed. Quickly I righted myself.

From the time the lights went out until I was balanced must have been measured in tenths of a second; yet, subjectively, each even followed the other with inexorable slowness. I knew that Danny had missed, that I'd reacted too fast, for once.

THAT SON had tried to push me under the table where I could have been crushed by tons of steel, or drowned by the circulating water. I stood there, kind of gaping, and let him hit me. Lucky that flight of steps was short: I rolled down it like a sack of fertilizer coming off the conveyor belt. By the time I was really aware of what

was happening, friend Danny, calm and cold as you please, was trying to dump me down the well.

And then all the frustration, fear, and adrenalin I'd had building up for the last few hours came bursting out. Forces had been acting on me, and I'd been pushed into the position of playing a passive role in the game of death—my own—and passivity has never appealed to me. It was no time for Queensberry, no time for tempering blows as a logical fighting instrument. It was time to let the emotions take over.

I kicked him in the crotch, and when he doubled over, I was able to regain my feet and get my breath. And that was all I needed. Don't ever laugh at the werewolf legend again. The wereanimal exists, and will continue to exist as long as there are human beings. Each of us is were, each of us carries the seeds.

In the eerie light we fought it out, Danny and I, but you really couldn't call it a fight —"no contest" might be closer to it. Tyrannosaurus and Mammoth joined me in a relative—to Danny—direct-line descendent hookup, and the three of us went to work. Over on the sidelines the second team of Gigantopithecus, Black Widow, and yet-to-be-born Homo superior stood 'round, lent support, and waited to go in. They weren't needed; Danny never had a chance.

HE LAY ON the floor, near the Concentrator, looking very unpretty, and very unconscious—or dead. I can't say that I cared, except that I wanted no more trouble from him. He seemed to be alive, so I tried a few slaps on the face —liberally applied—and some wash-water; neither alternative brought him around. I dragged him behind one of the big pumps and tied his hands. I was beginning to reason again: Danny's physical state was going to cause questions, and as yet I hadn't the right answers.

It became obvious that somebody was interested in my interest in those crystals. Danny had been asking about them ever since he came on duty; and it was now clear that Danny didn't ask questions pointlessly. No wonder I thought he seemed so intelligent! Briefly I wondered how hard he'd been laughing at me on the inside when I complimented him; even more briefly I wondered how our two I. Q.s compared. I wasn't taking any bets. I left him tied up, muttering, "That'll hold you for a while, Buster —and when I return, I'll want to know how you pulled that light trick, among other things."

On the way back to the main lab I began to feel

drained. The adrenalin anesthesia was wearing off; my knuckles were raw and smarting, my ribs ached, and I tasted blood from the cut in my lip where he'd hit me the first time. It had been great from the standpoint of discharging emotion, but what had I gained? I still didn't know *why*, and I had to find out in the next few hours or die.

I CHECKED OVER the whole blasted lab. I looked in every nook and cranny, determined that there would be no more interruptions, determined to find that answer. And then I locked the place up from the inside and went back into the weighing room.

The test slide was still in the microscope and I checked it. Things were about as I'd expected: there were only rudimentary crystals on it now, and even they were going.

With nervous fingers, dreading my actions—or the information I'd pick up from them—I put the slide on the balance and weighed it. The results hurt, even though I'd been suspicious. I sat, not breathing, staring at the delicate mechanism, staring at the analytical balance, staring at the end of the world. The weight—4.2102 grams—was less than the original tare, and there was no mistake. Simple fact, very simple fact, but it meant this: more than 0.02 grams of glass and Canada Balsam had disappeared along with the crystals.

Gulping, I thought of something else. I took a pin and scraped some skin from my thumb, dropped it on a slide, and set it up. I moved a few cells into the center of the field and waited. Sure, a polarizing petrographic microscope is nothing to be doing biopsies with, but it was the qualitative aspect in which I was interested. After all, I'd picked up a pinch of the crystals to drop on the slide.

A few minutes or millenia—I forget which—later, I had my answer. The cells all had holes in them, holes which expanded as I looked.

OK, BRIGHT EYES, so whatever-it-is attacks organic as well as inorganic matter. Don't act so surprised—I guessed that a long time ago and told you about it. What conclusions can be drawn?

What conclusions? Good Lord, the obvious one that they are no longer just after us, but the whole world—and that they stand a damn good chance of carrying it off. Whatever-it-is must be breaking down matter in some way, or altering it, and what's going to stop it?

Listen to me, Conclusion-Jumper, you can't possibly

make that assumption on the basis of known data. What about the scientific method?

You listen, and what about it? Already tonight you tried to talk me out of their being aliens, or do you want me to rub your nose in it some more? As far as the Method is concerned, when you can resolve that it actually is observation followed by inspiration and not the reverse, I'll go along. Till then I say that we pay attention to my hunches—and act on 'em.

You'd better not be wrong, Jumper.

What if I am? This is one case where I'm assuming the worst. If it isn't the entire world in jeopardy, we're just that much more ahead.

IV

THE NEXT few hours sped by too fast, too fast. At first I tried introducing a few of the poisons we had around, hoping that whatever-it-is would be subject to them; but it was useless, and I knew it. The field was too broad, even assuming that it was a form of life and not some sort of—call it universal solvent for want of a better name. I dealt in ridiculous terminology only because I had no background against which to compare the problem.

I finally settled on a working method: I attempted to study the process itself, hoping to become familiar with it, hoping for a hunch. The only difficulty was that the crystals didn't wait around long enough to be studied.

The sun came up, and then rose higher in the sky. The night shift ended, but not for me, and I heard signs of stirring activity outside. I stayed at the mike, despite the entrance of the part-time Saturday chemist—he was a student at the University—and his curious questions as to why I hadn't left, and why the door had been locked. His slight sarcasm about my devotion to duty and solving the world's problems didn't go over too well.

HE ASKED about the results of the sulfate-demand, and I was brought to reality with a snap. I'd forgotten about Danny! So I bluffed, and told him that Danny had been running the tests and should be bringing them over soon. I was going to have to tell someone shortly, and I was going to have to explain about the car I'd upended, but I was determined to get as much time as possible. And what could I say? Would anyone believe the truth, even if I had proof? Sure, I could show the disappearing crystal act, but could I tell them the reasons or the urgency involved?

A little while later, the kid went over to the plant lab and picked up Danny's log—as far as it went. Of Danny, there was no sign, and this proved to be somewhat of a relief. The assumption was that he'd taken off in mid-shift.

I continued to work, feeling desperate, getting no results and no further understanding. My eyes had grapefruits under the lids, and I felt each blood vessel twang and break.

Then Jim Malloch, Maintenance Supervisor, stopped by, said Good Morning, asked why I hadn't left, and asked the inevitable question about my lip. I gave him the inevitable answers: "Because I'm interested in what I'm doing. And I slipped on the steps of the filter building last night."

Jim looked at me. "Heard that Danny Keith jumped shift last night. Is that so?"

"Yeah, I left him running the sulfates, and he disappeared."

Jim looked at me again in a funny way and, smiling, asked, "Where did you get those knuckles?" He left before I could answer.

I DIGRESS for the moment to explain about Jim Malloch. Since he's owed the world's largest vote of thanks —if I had my way it would be the Congressional Medal of Honor—I think it is permissible. I liked him and respected his reasoning ability and how he used it. Or maybe it's just that I respect anyone out of MIT.

I remembered the year before, during the start-up operation, when one night we were both on graveyard shift. We'd been making idle talk, most about keeping the mind busy, when you're bored, by means of mathematical problems. I mentioned a game I knew—I got it from one of Weinbaum's stories—wherein you think of a number, a reasonable number and the other guy has to guess it by asking ten questions that can be answered by "yes" or "no". We began, and I thought of the square root of minus one. Jim guessed it in five plus questions, the plus being a slight hint I gave. But I don't mean to detract from the performance; it was excellent, and indicates his astuteness.

The morning wore on, and even I realized that I had to break soon; I was going completely stale. I went out through the reception room and into the parking lot. I was so tied up that I'd forgotten to flirt with Dot; in fact, I didn't notice her. This would be a little like not noticing the Grand Tetons, but it can be done.

OUTSIDE, in the lot, you got a blast of humidity. What a climate! It was hot, and a wet, hot wind blew

southward. There was a heat haze of mist over the entire valley of the Great Salt Lake.

The sky was a pale blue overhead that faded to a bluish-white at the horizon and merged with the valley haze. Clouds of cumulus dotted the celestial vault.

Smoke from the exhaust stacks at American Smelter and Refining drifted with the wind and piled up against the hills, whose bold and dark brown outcroppings presented an unrelieved monotony of color. Some patches of green —in response to the previous night's rain—appeared in what little, dying, thirst-ridden vegetation there was. Most of the valley itself was covered with sand and pale green sage brush. Occasional telegraph and power poles and lines thrust skyward, forlorn evidence of man's culture derived in more equitable climes.

The A S & R slag pile—a dark steel grey—ran in the immediate foreground into the town of Garfield, an old, dirty and parched collection of ramshakle buildings. Up behind it the land slides and ravines in the hills were buff and red-buff.

It was a perfect description of Hell—hot, thirsty, and arid —and for my money, much better than the classical. I wondered if this was what the whole Earth would soon resemble.

The humidity was high because the sun was drawing back to the atmosphere all the water last night's clouds had graciously wasted. So the Lord giveth and the Lord taketh away? Still, I couldn't imagine Him being quite so calloused as to allow anything like this to happen to California, or Pennsylvania, or the Hudson Valley; perhaps He was just waiting to find out if there was anyone around who cared enough.

Depressed, and feeling that the break had done more harm than good, I reentered the building. Again I ignored Dot, and she was becoming a little annoyed. But I figured glands were glands, and the matter solvent was a matter solvent, and the twain had better not meet.

FOR THE hundredth or thousandth time I made up a slide and looked at it—and then blinked and looked again. Excitement went shooting through me, and hope I tried to ignore.

Because the slide was different from all the others. The crystals stood out in relief much more boldly, and while some were half-eaten, they stayed that way! I checked and rechecked, but there was no doubt: for some reason the process had been inhibited, perhaps stopped.

I waited a while and looked again. Nope, there was no evi-

dence of further disappearance. So here it was, the answer about which I'd had doubts, somewhere in the weighing room. And then came the panic to find it. What had I done differently?

It didn't really take long. I got off the stool and stood back, getting a perspective. And then I saw the stirring rod, which I'd thought I left in the flask of Canada Balsam. Apparently, I'd been so intent on the slide I hadn't noticed dropping the rod into a flask of caustic, the same caustic I'd been working with in the methylene blue determination and which, fervent thanks, I'd not bothered to clean up.

Conclusion jumping is all very well, but this was once when I wanted to be sure. Several times I tried it, and several times I got the same result. I was batting a thousand, and even the other, more meticulous half of me had to be satisfied with it. For some reason, caustic—plain old lye that you unplug drains with—inhibited or stopped the matter solvent. When the trick worked equally well with amonium hydroxide, I knew it was the hydroxylion that was the important factor.

NOW IT WAS time to stop philosophizing and take action, and first on the agenda was me. I poured the caustic all over my hand, the thumb and forefinger of which by now were beginning to be raw where I'd pinched up the infected crystals. It took several minutes for my head to come down from the ceiling where it jumped when the lye hit the open patches, but I wasn't paying too much attention. I'd gathered up all the equipment with which I worked that night—*everything* that had come into contact with the solvent—and dumped it into a beaker filled with the caustic.

I suppose if I were a real scientist-type scientist, a steady bulldog of a research man, I would have prepared myself several different concentrations of the caustic and determined the minimum pH at which inhibition took place. But I didn't have time, and I wasn't that calm—the stuff had been in Tank E for several hours that I knew of. *Tank E!* Then I knew why the urgency; someone had mentioned the day before that they were going to start mixing out of E tomorrow—only tomorrow was now today. So tomorrow never comes, huh? One thing was apparent: the jerk who made up that jimdandy little paradox wouldn't see many more tomorrows if Tank E were tapped.

I went out of the lab as if I was Casey opening the throttle.

And stopped when I hit the reception room. Something

cold and hard grabbed hold of my trachea and squeezed. I said, "I complained about the sulfate-demand runs, and that I wanted to work on crystal formation. *And you were the only one to whom I did that complaining!*"

DOT LOOKED at me levelly. There was no embarrassment, no shying away from something too obvious to be denied. "So you know."

"Yeah. And something else, too. The answer to your little riddle of now-you-see-it-now-you-don't."

"Oh?" she asked with a certain amount of amusement, almost contempt.

"Yes, *Oh.*" I was getting mad again. It seemed to me that these e-t's had been treating me with as patronizing an air as any plain old-fashioned Earthman ever did, when trying to show superiority. Had I the time, I would have lectured her on the empires that fell because a miscalculation had been made: human dignity had been ignored. Instead I simply added, "I intend to put a stop to it." As I uttered the words I moved for the door leading to the store-room and thence to the plant.

"You may not realize it"—her voice, low and sexy under the proper circumstances, but now sounding like a judge pronouncing sentence, cut deep inside me—"but you'll be dead thirty seconds after you leave here." Then she smiled, and the circumstances turned proper, "Personally, I'd prefer that you stay; you're a nice guy."

"For God's sake, Lover, don't get dramatic on me," I said, but I noticed that I wasn't moving for the door anymore. "If you knew a bit more about *our* culture, you'd know the literature was full of these situations. Here, I'll hackney one up for you. Boy and Girl feel boyish and girlish toward one another, but she's a spy for the Enemy, and he's about to tip her hand. If he does, why, she'll simply have to kill him. After all, Duty, like Norman Blood, is thicker than water—but not quite as thick as either the Boy or Girl."

SHE NODDED, quite seriously. "That's exactly it." And I don't think she got the broad humor at all.

"Only you can't," I suddenly rapped out, feeling confident again. "You couldn't, for instance, whip out one of those 45 calibre disintegrator rayguns and knock me over. Have you forgotten? The boss says it's supposed to look like an accident, and you'd have a hard time explaining that one. 'Course, you could always tell people that your electric typewriter strangled me..."

She looked annoyed. "Every time I begin to respect your reasoning ability, you

convince me I'm wrong. In the first place, *I* wouldn't shoot you, since my job here is to organize and integrate. Field missions of the nature of which you talk are carried out by different personality figures. However, we do have them right here in this plant, now.

"But since my job is the carrying out of the overall plan, if I should decide it is imperative that you be...removed immediately, then you would be—regardless of appearances."

I'd been moving for the door again, but I stopped when she said that. "You mean...*you* are Mr. Big? You're actually responsible for the things that have happened to me?"

Her nod was casual, as casual as the answering nod to the vet's question of putting away a stray dog. All of a sudden I knew how the dog felt, and I didn't like it. I got mad again.

"Go ahead," she said, "get mad. Meanwhile, try to see things from my point of view. I'll put it in terms you can understand.

"SUPPOSE there was something you had to do—suppose you were building a swimming pool and your favorite apple tree was in the way. You liked that tree a lot—it gave you shade and food—but you still wouldn't hesitate. And cutting down the tree wouldn't necessarily mean you were mad at it—it'd simply be something to get rid of."

"I see your point," I conceded, not liking the position of old family apple tree, "but I still want to know why *I* have to be cut down."

"Because you, through an accident, are capable of negating an operation which has taken a year to reach a culmination, an operation which has been planned for a much longer period of time.

"There's a war going on out there"—she waved a hand almost airily and I knew she meant outside this system; possibly even outside the galaxy—"fought between two evenly-matched races. They are evenly matched to a point of fantasy—same resources, populations, capabilities. What one has come up with, the other has countered immediately. A balance so stable exists that there hasn't been any real fighting in years. Only our laboratories are hard at work.

"We—and very likely they—have arrived at a Theory of Collapse. We postulate that if we had some weapon that could be utilized to make the balance unstable, even for a brief moment, then the enemy would collapse suddenly. We constantly do get new weapons—but they must be tried

without the enemy knowing about them.

"So we come to you. We—and again very likely they—have a series of 'field test' planets where the weapons are tried. If they are countered, they are obviously of no use."

I was beginning to feel good again, so I interrupted cockily, "Keep talking—you're building up my ego. You realize the implication of your last statements?" In fact, I'd taken such a general beating in contact with them that I thought I'd crow just a little. I rubbed salt into her wounds: "If we are smart enough to check your weapon, then your enemy will also be smart enough. Which implies a certain equivalence between us and them—and, therefore, between us and you! You're not so hot."

I GRINNED a nasty, superior grin as I ended and the barb went home. She didn't like it at all, but she did continue, "You keep bragging and I might have to fix you right now."—(I thought of a snappy comeback to that one, too, but you can't use it in mixed company) "we have been working here getting established since this plant opened, a little before you arrived last year. And because you just happened to be in a position where you might—and did—find out on the one night our plans could be interrupted, we had to try to stop you, without anyone realizing why."

"Too bad you failed," I grinned.

Dot smiled back sweetly, "I haven't noticed our plans being interrupted."

SHE WAS right. While I stood talking, the time was drawing near when tank E would be used. And it became apparent that once we'd used it to make the fertilizer, and the fertilizer was bagged, and the bags wer shipped out, all over the country, there would be no way of stopping them or the process.

I began to feel fear, and hated myself not for the emotion, but because I couldn't control it. And I knew that she—all of them—could receive emotion as well as broadcast it.

"I'll be completely honest with you: the reason we picked this plant lies in the nature of this thing we have unleashed. It needs strongly acid conditions initially to begin working; after that it proceeds on its own. And what better place can you suggest than a new acid plant?"

"Why haven't you done this a long time ago." I asked, "Say at the start-up, when there was nothing but confusion around here."

"We've only just received it, even though we've been planning this for some time. And then you drop in, like

some great blundering thing. What so you suppose the odds are that you would have been here during the three-day crucial time, that you would have examined the slurry when you did, and that you would have taken it from tank E? And now you know why you had to be eliminated."

Yeah, I *did* know. I knew also I should make some sort of decision. The outward effect of all this was that I frowned and shuffled my feet, not at all the sort of action I could be proud of.

"On the other hand," she said, as she came around the desk, "it would be silly to cut down the tree when it could be transplanted."

I felt like the rabbit watching a snake approach. I wanted to run but couldn't. "Yeah? Where?"

"Come back with us." She put both hands on my shoulders. "All you have to do is forget what you've learned here for two or three days."

I WASN'T feeling fear any more, that was gone. Here was a strikingly beautiful woman before me, radiating—literally—on all six. My mouth was dry, and I gave up all attempts at swallowing. I stopped breathing, resigned to asphyxia, but what a wonderful way to die.

I became all the lovers in the world—that Romeo was a piker; I *know*—only this wasn't love: it was refined, extracted, recrystallized pure essence of sex. I said things—what, you don't need to know—but I swear on my copy of the Kinsey that I'm embarrassed to this day when I think about them.

I got as far as kissing her—and this shouldn't happen to you, for you'll be ruined the rest of your life as I—when my head came down out of the clouds. Maybe it was just a reaction from the sustained level. I realized what was happening. "You bitch!" I ground out, "You're—broadcasting." Each word was an effort, for while she, as with the oddball in the restaurant, was also sticky-warm, she was anything but repulsive.

"Of course I am, but now I'm not." And she did stop. The feeling was diminished somewhat—about like ceasing to be a millionaire because you've only got $999,999 in the bank—and it was then I realized some of the ramifications of their ability. Not only could they send their emotions, they could intensify ours.

"I showed you that merely to suggest that it can be turned on and off—but especially on—at the right times." She said this in that low voice, and I knew damned well what she was implying; and again I began to forget all about the world and its troubles.

HEY, HEY, Bright Eyes, you're doing real well. Gonna sell your birthright for a pot of message?

You show up at the loveliest times—and what do you mean?

The message is simple, but since I have to think for both of us, I'll explain in words of one syllable: 'Come with me you great big wonderful primitive you, and I'll show you the inside of bedrooms from here to Procyon IV.' Love in Free Fall. Hoo, Ha!

I think she means it—

She might, she might. But it would be just as easy to knock you off after a two or three day delay. Even assuming she was being truthful, what would you get out of it? After a year or two, what then? Think they'd show you their science? Their advance? *Sure* they would!

But—

Listen to me! This appeal is being made by her in the rawest of all possible terms, and you are reacting like a highschool adolescent. Snap out of it and start being an adult male. What about your oft-repeated—and you should pardon ten thousand times the use of an Emotional phrase—pride in the Dignity of Man?

Damn you, safe-and-sane, you know me too well...

HER HANDS were still linked around my neck, and languidly I asked, "What if I still say no?"

"You'd never stop us—and we'd be forced to cut down the tree."

I stopped being languid then; I'd made the decision and I didn't care what she read. "That's what you'd like me to believe. Only, if the cards were all stacked against me, why are you so anxious to keep me from trying?"

For the first time her composure was upset, and I grinned, I hope sardonically, "Better get Headquarters to issue a manual on the Psychology of Local Primitives."

Quickly I looked over the phone switchboard, but it was hopeless attempting to put that out of action. It was bolted to the floor, and the cables couldn't have been cut without tools. I toyed, very briefly, with the idea of making Dot inoperative, but, so help me I couldn't raise a fist against her. Even if I'd wanted to, I was leery of matching my resolve against the intensity of feeling she would undoubtedly be directing at me.

INSTEAD, I took one last look, wondering even at that moment—like a groom being asked whether he does—if I was really making the right decision. I muttered something about her being a lovely Southern belle, but I was a Boy in Blue, and Mr. Linclon's message had to go through. She didn't under-

stand, and I didn't have time to explain. I ran out—but not into the storeroom, as they might have expected. I went out the front door, back into the parking lot.

I figured that I could circle around the office building and come back into the plant through the driveway. This would take time—much more than if I'd gone through from Dot's office — but it would also take time for her to call the strong-armers and inform them of the change. One thing I did know: I never would have stepped out of that storeroom alive.

The gamble paid off; I made it around the building, hugging the wall. It was still hot, and it was still humid, but these weren't the only reasons why the ring of perspiration broke out on my forehead. Everything was out now: there would be no more "accidents;" I wouldn't be allowed any mistakes.

I glanced down the driveway and cursed my luck. It was between shifts and hot; the usual flow of workers from the buildings toward the office was missing. Besides, it was Saturday; there was only a skeleton crew on duty, and no one was in sight. Two hundred yards away, across completely open ground, was tank E. The only relief was where the railroad tracks crossed the driveway at right angles to it and the general direction of the entire plant. There the ground was slightly lower. Fifty or a hundred feet to the right of the driveway was a string of tank cars of ammonia; but they lay in the same direction as the storeroom, and I wasn't in a hurry to go that way. Farther down, in back of the tracks, were the supports for the overhead pipelines leading from the storage tanks to the mixing building.

I STOOD there, thinking of those sheared-off, vulcanized tires and thinking that I'd better hurry. Tentatively, I moved away from the building, then jumped back as some intuitive voice cried a warning in my mind. I felt a wave of heat go past the corner of the building, they were already on the job!

I dropped flat, put my head as close to the ground as I could, and peered toward the storeroom. I saw something which first scared me and then filled me with exultation. From where I was to where I assumed they were, was about seventy-five feet. They'd fired the gismo, and it had burned a swath toward me. The ground was gouged out with a fused scar, deeper close to the point of blast, but getting more shallow towards me and finally disappearing completely. And that trough ended several feet away!

What this meant, simply, was that I was out of range —I hoped! But the longer

I stayed where I was, the more I increased the chances of their realizing what the score was and charging me.

I jumped up and began to run like Landy. More heat rolled past while I was running; it couldn't have been more than a couple of seconds later. I looked over my shoulder and saw another scar; it fell far short. I started to feel safe when, a few feet to my left, a small hunk of the asphalt driveway leapt up into the air like a divot from an amateur golfer. It happened again; I zigged off to the right, reached the tracks, and fell flat. Some fox hole!

IF I'D HAD any breath, I would have sworn lustily aloud. The swine had crossed me up: they were using old-fashioned *guns.* No discernable noise, but you can't hear a silencer that far away. Just to make me feel good another rock jumpd close by, but in a different direction. Now they were working from two places, the storeroom and the locker room, across from the office building. Cute? They'd have a fix on me soon. I just couldn't lie there and let them pot at me.

Then I noticed one of the supports for the pipeline close by; there was an attached steel ladder behind it. If I could make it to there, I could put the support between me and the ladder; I could get up to the pipeline and travel along it.

I saw the storeroom door opening, and realized that they couldn't afford to wait much longer themselves. They still had to get rid of me without being seen doing so.

I grabbed the biggest mouthful of air I could, got up like a scared rabbit, and ran the fifteen yards to the ladder. It was the longest fifteen yards I ever covered. The ground had become a morass of taffy, malicious taffy that clung to my shoes. Every step required that I disengage my foot, move it in an arc in slow motion, then set it down again to concentrate on the other foot. Once or twice the taffy jumped up and spattered pieces against me. The last piece hit my shin, whip-like, and hurt. But I did reach the ladder, mainly still healthy. And I climbed it, blessing the protection the support gave me. It wasn't complete protection; one of their slugs managed to hit the ladder. There was a loud clang, and my head rang, a tuning fork of not-so-harmonic vibrations. I got up to the pipeline, lay gasping for a few seconds, and then began to inch along the walkway on my hands and knees, keeping the pipe between me and my hot-tempered friends below.

YOU'D BE surprised how fast you can go on your hands and knees; I was. I

reached the storage tanks, and climbed down the back ladder; and then I was at tank E's outlet valve.

The tanks have to be cleaned occasionally; the valves empty into a ditch which, in turn, can empty into the main waste-water ditch. I was going to empty the tank into the ditch and neutralize it. I grabbed hold of the handle—it was as big as a steering wheel on a car—and turned, only nothing happened. It was stuck—they *always* stick, and at the most inappropriate times. I knew that the Bad Guys were planning something else, though I couldn't see them; so I tugged desperately at the valve. Still nothing happened; it just wouldn't budge.

I looked around for a lever to pry it with, and spotted an old hunk of scrap lumber. Wedging it into place, I was just about to throw some force on it when a voice snapped out, "What the hell are you doing?"

It was Malloch. He must have come from the Filter Building; I hadn't seen him approach. He stood swinging a wrench in his hand, and I had no doubt that he would have used it on me: engineers don't go for industrial sabotage. The only thing I could do was tell him the truth. "I am emptying the tank."

I DON'T THINK he really believed that I would do such a thing. "All twenty thousand gallons? Why?"

What could I do? I had to tell him the whole story, begrudging the time it took, knowing he wouldn't believe me. Only he did, conditionally.

"You still have some of the slides?" he asked. At my nod he continued, "If they show what you claim, I'll come back here and help you."

It was more than I had any right to expect, but I still felt and looked glum. "Time is of the essence; we don't have much of it."

Jim replied, "Sure—and there's $15,000 worth of phosphoric acid that you want to spill on the ground. That would give us the best fertilized plot of desert in the West, but I still want to check."

I shrugged, and he started to leave. "You better go back the way you came. If they see you coming from here, they might take a shot at you just on general principles. They may do that, anyway; be careful!"

He nodded, and left. I waited, wondering how to kill the nine or ten minutes it would take him to return. I was in a bad spot: vulnerable, unable to see what the enemy was doing, and unable to leave. I was somewhat better off because I now had an ally, or would have as soon as he saw the slides and the burned

ground. But I was just going to have to wait here.

My shin was hurting. A little piece of rock had spalled off when it had been hit by a bullet and buried itself in me. I was tired past the point of caring; I would have given a lot to be able to relax. But then the obvious thought struck me that Malloch would return convinced; why should I wait?

I TURNED to see one of the plant workers holding a gun on me. It was strange-looking and, crazily, it was all I could concentrate on. Wearily I asked, "Is that the kind that gives the super hotfoot, or the simple one that puts holes in people?"

"It shoots bullets; I am afraid I have to use it on you."

I ignored the last part of his statement. "You mean you guys were firing one of those at me across a hundred yards *with accuracy?*" For the first time, I really suspected their technology. Imagine a pistol that would fire that far! Apparently, I stood there woolgathering for he said, firmly, "I'll do this as quickly as possible. Just turn around; you won't feel anything."

Dispassionately—and oddly enough I really felt that way—I said, "We *are* fighting a gentlemanly fight, aren't we? Look at all the trouble you're taking. A man of this planet wouldn't."

"We really do not bear you any ill-will. I am sorry this has to be done; but you represent a road block in the path of—"

"I know, I know. I've had this all explained before—except then I was an apple tree. But would you mind explaining why I won't feel anything?"

"I will," he answered mildly, "and then I am afraid I really shall have to insist that we get on with it. You are—what is the expression?—stalling for time, and we cannot have that. The nozzle will be placed right under your foramen magnum; the bullet will enter your brain with terrific force. You'll be dead before you can comprehend what has happened."

"It is kind of you to be so clinical," I said sarcastically.

"Turn around, please," he ordered, ignoring my bitterness, "you know, I could make this messy—and painful."

I GRIMACED and turned, knowing that I had one last trump to play, knowing that I had to play it at exactly the right time.

I heard his foosteps approaching; I waited. Apparently the jerk expected me to stand there and take it like a gentleman; I had other plans. I heard that pause which meant he'd come into position behind me. I swung around, clasping both my hands to-

gether, and swung them to intersect where I thought he'd be bringing the gun up.

It worked; my timing had been just right. The gun went off, but it was pointed toward the sky. It didn't make any noise; however, I was too busy to notice. I concentrated on getting the gun out of his hand; I managed to do that, too, and it was my big mistake.

Without the gun to worry about, he began to think in terms of fighting me. And this wasn't any Danny I was playing with; this one was taller than I, weighed considerable more, had a longer reach, and was stronger.

You know what? I lost. I hit him a couple of times and apparently made no impression. The louse hit me back: the first time, I remember bouncing off the wall of the storage tank. The next time, things were a little fuzzy, and I don't remember any bouncing at all. One of my last impressions was a composite sort of thing. He was on top of me, his hands around my throat. I couldn't seem to breathe, and there was a muted hum in my ears. From far away I heard him say, "I told you I could make this painful and messy," but it didn't make much sense at the time. The thought that kept running around in head was: *This'll teach you to turn down a proposition; now her big brother is after you.*

Black peaked waves started moving in, and I struggled against them. There was something I had to do, something c o n c e r n i n g Earth, something...

IT SOUNDED like running water, but it wasn't. It was a far lovelier sound: that of phosphoric acid e m p t y i n g into the ditch. The valve was wide open, and from it spouted a green, viscous stream. I turned the monstrously large lump I called my head and saw my recent antagonist s t r e t c h e d out, Malloch's wrench beside him.

I rose unsteadily, ignoring the fact that my head was connected to my body by a short column of pain. Malloch came into view, saying "You're going to have a sore throat for a couple of days."

"Well, the Marines? You took your time about landing. And if by throat you mean this thing with which it is impossible to swallow, how right you are."

It could have been worse, though. Malloch could have arrived a minute later rather than sooner. He had come upon the two of us, realized what the situation was, and clobbered the guy. I was still breathing, so he busied himself discharging the tank.

He'd also managed to round up a crew who were getting the ammonia tank cars into position, and I guess by then the e-t's realized the cat was out of the bag. They'd disap-

peared; we never saw any of them again.

WE WORKED the rest of that day, treating that ditch. We had a couple of thousand gallons of caustic on hand for adjusting the pH of the main ditch water. We diluted it and pumped it in. We pumped the ammonia from the tank cars into the ditch water and then we back-pressured that into the discharge ditch and into tank E. All those millions, billions, and trillions of lovely little hydroxide ions going to work, like white corpuscles in a blood stream. All those thousands of dollars, literally going up into smoke. In good cause, sure, but someone was going to have to pay for it. Sometime in that hectic afternoon I cleared the lab stock shelves of all the hydroxides I could find, and dumped them in, too.

We kept it. We washed and re-washed. Tank E was scrubbed clean and filled with a basic solution and emptied again. We did everything humanly—and inhumanly—possible. And when we were through, we felt reasonably sure we had won. We don't know definitely; it will take years yet to be certain. If any of the gunk escaped us and got into the main ditch, it will have been carried eventually into Salt Lake. It grows, you know; we proved that with the slides. But it grows slowly, and it will be localized, and we know what steps to take. However, every once in a while Jim or I pilgrimage out along the ditch, picking up samples to check. So far, nothng.

MALLOCH is somewhat of a magician. He convinced the higher-ups that the guy we'd caught had been emptying tank E, and we hadn't stopped him until it was too late. And that we'd used the ammonia to neutralize the acid. This is patent nonsense, but it only goes to show what will be believed if the lie is big enough. Our friend was meanwhile jugged, but he escaped—all of which is evidence to my mind that they are still operating here.

These details are relatively meaningless, though. What I wanted to say is this: *they are pretty stupid!* Sure, they have an interstellar drive, can broadcast and receive emotion—which isn't nearly as efficient as telepathy—and have advanced armament. But we could build a heat ray right now, and I bet if we really set our minds to it in twenty or thirty years we could come up with an interstellar drive; after all, now we know it can be done.

From the time I became aware of them—from the mix-up in the coffee shop—they impressed me with two facets that we can employ: first, in spite of their technological

advance, they really aren't any more clever than we; nor can they think any better or faster. I proved that, and Lord knows I've never been noted for my reasoning ability. They stumble along, trying to muddle through, in as silly a way as we—only we ain't so proud of the way we have done some things. Which brings me to the second point:

They have a completely unjustified, but overwhelmingly good, opinion of themselves. This means they underestimate all the "primitive" races with which they have contact. It is a bad mistake, especially when at least one of the primitive races is at parity with them.

EVERYTHING they did exposed their ignorance of us, and their relative stupidity. I think I could have done a better job at eliminating opposition than they, even with the "primitive" tools at my d i s p o s a l. Obviously, from what the girl said, they were trying this in just one place. And here is a further indication of their incompetence. Next, look at that war of t h e i r s—they haven't even brains enough to call it quits, especially between two so evenly-matched peoples. Dot as much as told me they hadn't a major skirmish in years, but still they go on. Think what they could do if the two sides combined!

So OK, we've met a race of extra-terrestrials. What are we supposed to do, roll over and play dead? Nuts; we've got it all over 'em. Just be alert. It may happen again—it will happen again—and we are at a disadvantage until we can meet them on our terms.

"Sure, we're a "field test" planet of theirs. Therein lies our strength: they really don't know what they've tapped here. If they did, they would have made a concerted effort to destroy us years ago. Give us another century or so, and they'll be a field test planet of ours!

As for me, you are crazy if you think I have no regrets. Every once in a while I dream of Dot and what could have been, and I awake knowing what is, and I cuss you and me and my suspicious, analytical nature.

What I did, I sure as hell didn't do for medals or your sake. I guess I just figure that a planet in hand is worth two in the postulated parsec-bush, if you know what I mean. And I've begun to mellow: as often as I think of Dot, I also think of Streator Chevrolet, and the kids who helped me; the sun setting on the range west of the Lake itself, and the smell of Parley's Canyon in the Wasatches after a rain; even one of those filets up at Finn's so tender you can cut it with a fork. And you know, Utah isn't such a bad place after all!

SATURNALIA

by RANDALL GARRETT

(Author of "The Saboteur")
illustrated by EMSH

It was gravity that made the situation so grave, here on this space station within mighty Saturn's rings . . .

JAMES FENRIS stood at the wide, thick window and looked out at the fearful wall of gas that filled most of the sky. It was nearly three thousand miles away, but it seemed as though he could have reached out and touched it—stirred that vast, thick soup of hydrogen, methane, and ammonia with his finger.

Saturn, the beauty of the Solar System; Saturn, a giant, terrifying ball of delicately shaded yellow, orange, and brown bands; Saturn, half witch and half goddess, both terrifying and beautiful.

Fenris tore his eyes away from the window and looked

Suddenly, her arms were around him, and . . .

at the bank of recording instruments to his left, where wiggling needles measured and recorded the gravitational fluctuations and magnetic variations of the giant planet, as the Saturn Survey Station spun dizzyingly around the great globe. Once every five hours, the station looped over the planet from pole to pole, well within Roche's Limit, nearly eleven thousand miles within the ring itself. There were times when Fenris half wondered if humanity actually controlled enough power to enable anything to escape from the grasp of that monstrous gravitational field.

"What's eating you, Fenris?"

FENRIS jerked his head around, startled. "Oh! Hi, Georgia. Nothing's exactly eating me, I guess. Except—" He waved a hand at the window. "—except that. Somehow, it gives me the creeps."

The girl walked over to the window and looked out. "I know what you mean; it looks as though it keeps coming closer...as though we were falling..."

"Yeah." But Fenris found himself looking at the girl instead of the planet. In profile, her face had a crisp, finely-chiselled look, as though she were a work of delicate sculpture instead of a human being. Her eyes were large and heavy-lidded, her mouth generous and full. Her face, framed by a tumble of blonde hair, had the look of the "sultry siren", and the sway of her lips when she walked accentuated the effect. It was odd, Fenris thought, that her personality and conversation didn't bear out her actions at all.

He suddenly realized that she had turned her head, and was looking at him. He felt a crimson flush rise in his throat and burn at his ears.

He knew the blush didn't show; Fenris was a dark man, with dark, straight hair, and a heavy tan that would never let the red of a blush through. He knew it didn't show, but he still felt embarrassed. "Uh, Georgia—what—what time is it," he said lamely.

She glanced down at the time dial on her instrument cuff. "Seventeen fifty-six. We've got four minutes yet."

"I—" He started—and that was as far as he got.

"*Hel*-lo, kiddies! Are we ready for the Great White Father's centennial speech?"

Leland Conger was a big, ebullent, handsome blond with a perpetual grin and a bubbling, aggressive manner.

"Centennial speech?" Georgia Ellis's unsmiling face looked puzzled.

"Yup," said Conger. "I just figured it out. Saturn Survey Station will have been in orbit exactly twenty days and twenty hours, as of eighteen

hundred. That's exactly one hundred revolutions around Saturn—our centennial."

Fenris grinned lopsidedly. "I guess that's right: well, we'd better get to the briefing room."

Conger looked at him oddly for a second, then said: "I suppose we had."

DR. DAHLQUIST stood on the platform of the briefing room and looked over the crowd, peering at them through slightly nearsighted eyes. "Is everybody here?"

He lifted a finger and began poking it in the air, counting them. "...seventeen, eighteen, nineteen—counting me, that's twenty. All present and accounted for."

He ran his fingers through his graying hair and then clasped his hands behind his back. "Well, now," he began, "we all know why we're here, don't we?"

They knew. Fenris, leaning back in his chair, felt more comfortable—now that he didn't have to look out the window. He could think more clearly.

"Remember," Dahlquist went on, "we're not the only team working on this problem. The Jovian Survey Station has been in operation for nearly a month; between the two of us, we ought to get the information the Institute needs in pretty short order."

Fenris hoped to heaven Dahlquist was right. Checking the interaction of magneto-gravitic fields in the area of the huge, rapidly rotating bodies would tell them something—they hoped.

IT HAD LONG been suspected that the spinning of a huge mass could, in itself, produce a magnetic field. If so, this promised something new in the way of space drives; but there had been no way of checking the theory on Earth. The guesses indicated that nothing positive would show up unless the body was really massive, and had a rapid rate of spin. Jupiter and Saturn were the most massive bodies in the System; their rotation periods were on the order of ten hours.

But how to get out to those planets in the first place?

Not even the early ion drives, which had taken Man to Mars and Venus, had had power enough to fight the gravity fields of the two monsters—even if they could have carried anyone out there in any reasonable length of time.

Not until the paragravity equations of Blenheim had made the reversible g-field possible had Man been able to get to the outer planets. Once that had happened, Mankind was ready to go to the stars themselves, and magneto-gravitic research seemed to point the way.

THE SATURN SURVEY STATION had been completed and set up, ready for operation, only a few hours before the "centennial" speech, having been towed into orbit by null-g ships and outfitted after it was swinging around Saturn. For twenty days, the construction crews had worked in free fall to get the station ready for occupancy by the research team. Then, at last, the paragravity generators were turned on and the team had come in from the dome on tiny Mimas.

It had taken a while to set up and check all the instruments, but that was nothing compared with the work that was yet to be done. It made Fenris wince mentally to think of all the data correlation and computation that remained to be done before anything new would come out of the Saturn Survey Station.

"The instruments will be manned in three eight-hour relays," Dr. Dahlquist was saying. "There will be six men to a team, and Dr. Jagger and I will be on call at any time. He and I will have to sneak in our sleep when we can. Now—" He lifted a sheet of paper out of his belt. "—here are the assignments for the shifts."

He began reading them out. Fenris listened attentively, waiting for his own name to be called.

"Third shift: Conger, Dylan, Ellis, Fenris, and Jason. Conger, Ellis, and Fenris will take the upper level; the others the lower."

Leland Conger, who was sitting next to Fenris, jabbed him in the ribs. "That's us," he whispered. "Both of us. Together with the lushest looking broad in the team. I'll toss you for her."

Fenris swallowed and said nothing.

OVER THE ringed planet's North Pole, past the Equator; over the South Pole, past the Equator—around and around went the Saturn Survey Station. Cameras trained on the top of the atmosphere recorded changes there; powerful radar beams probed deep within that atmosphere, which was almost literally thicker than pea soup. Magnetic analyzers flickered and wobbled as the polarity of the magnetic field changed. Gravity analyzers chuckled smoothly to themselves as they analyzed, balanced, and integrated the variations in the field—variations which were due to varying densities within the planet, and the differences between its polar and its equatorial diameter.

Around and around and around.

At a great distance, a planet acts as a point source of gravitational attraction; as far as Earth is concerned, for

example, the main focus of its orbit is at the center of the Sun. But the Saturn Survey Station was dangerously close to its huge primary, well inside the ring system; and the rings of Saturn are inside Roche's Limit. The pull of the planet at that distance is not in one direction only; at the equator, the Station found itself pulled in one direction by the mass towards the North Pole, and in another direction by that towards the South.

At that distance, any moon of any considerable size would be broken into fragments by the conflicting pulls. Only the relatively small size of the Station, and the fact that it was made of high-grade structural metals instead of rock, saved it from being pulled to pieces under the conflicting tugs of the huge planet.

They had to be in that close, in order to get the data that was needed. So...around and around went the Station —at a velocity on the order of fifty thousand miles an hour.

And those inside watched and checked and worked.

JAMES FENRIS had a headache. It seemed to throb slowly, like the heartbeat of a man in surgical coldsleep: *kaaaa-THUMP ... kaaaa-THUMP ... kaaaa-THUMP...*

And yet, it wasn't a headache; it seemed to be something below the physical, something that aspirin or neodescarine couldn't cure. Because it didn't really hurt.

But still...it *was* a headache.

A headache that didn't hurt? Silly!

Fenris shook his head violently and forced himself to look at his instrument board.

Four point three...check— nine oh nine eight...check check...

The instruments were in perfect working order, so far; he'd had to replace an erratic tube, but that was all. Still, there seemed to be something queer about their actions, as though they were *all* uniformly erratic. They seemed to jump and quiver in unison, in time with the throb in his head.

Across the room, Conger was leaning over Georgia Ellis, talking in a low voice. The girl wasn't objecting, but she gave the impression of cringing away from the almost overwhelming familiarity of the man.

FENRIS had met them both on Mimas, while the construction crews were putting the Station in orbit. At first glance, Georgia had appeared to be a lovely, warmly human woman; but a closer look showed that the seeming warmth covered up an icy

core. She either feared or hated men—perhaps both.

Everyone but Leland Conger had spotted it. The men left her alone; they were polite to her, and even friendly, but they knew their place. The women spoke to her when they had to, and avoided her when they could.

But not Conger. There were other women in the team, but Conger had decided that Georgia Ellis was Target Number One. Maybe that was all right for Conger, Fenris thought. Leland seemed to be the kind of man whose charm and persistance could break down or wear away almost any woman's resistance.

There were times when Fenris wished he had that kind of aggressiveness and tenacity. But it was impossible; women made him blush and fumble and spout feeble inanitites.

I wonder—am I afraid of women? Do I hate them?

No; it wasn't that. It wasn't fear—or hatred, either; it was a double-minded confusion deep within him. He was afraid, perhaps, of his own inadequacies—afraid of offending, afraid of ridicule—but not afraid of women, as such.

I'm just plain yellow, he thought, half contemptuously.

The throbbing in his head seemed to speed up a little. Angry with the throb and angry with himself, he turned back to his instruments.

"Don't be ridiculous, Conger!"

FENRIS HEARD Georgia's voice fairly crackle across the room, although she was not speaking at all loudly. He didn't turn to look; it was none of his business. There were footsteps across the room, and, quite suddenly, Georgia was beside him.

"How are they, Fenris?" Her voice sounded a little strained.

He turned his head and smiled at her. "Pretty good. The paragravity insulation fields don't seem to be allowing any leakage through to the instruments themselves."

She smiled hesitantly and then looked away, watching the q u i v e r i n g needles. "They'd better not l e a k. We're supposed to record Saturn's gravity, not the peegee field in the Station."

She *was* strained; Georgia wasn't in the habit of telling people the obvious.

"Nothing's p e r f e c t," he said. "There's a tiny amount of influence from the peegee generators, but we can take it into account in our computations."

"Yes. Yes, of course." She wasn't paying any attention to what either of them were saying. He wondered what it was that Conger had said to her. He could imagine the

general tenor of the conversation, but how, exactly, had Conger worded it?

And why had she come to him? For protection? The idea was ludicrous.

The door opened and Markholdt stepped in. "Okay," he called out, "you people can knock off. We'll take over."

Georgia glanced at her wrist. "I didn't realize it was time for the first shift yet. Thank heaven they're here; I think I have a slight headache."

THE TEAM had been on the Station for fifteen days before the director, Dr. Dahlquist, called them all together for another general conference. His face looked haggard and a little worried.

I wonder what's the trouble? Fenris thought.

His headache didn't seem to bother him any more, although he occasionally fancied he could feel a faint buzzing in his head. It had never hurt enough to drive him to the infirmary, or even to complain of it, but it had been annoying—until a few days ago.

Others had complained, but Jagger, the medic, explained that the tension of the new project, and the strain of adjustment to the looming planet that hung just outside the window, had undoubtedly aroused psychic disturbances which were annoying, but negligable. And, as he had predicted, the headaches had passed away.

Dahlquist waited quietly until everyone was in the room, then cleared his throat softly. "We have had some rather bad news." His eyes narrowed. "It concerns us, in a way, although not directly. The Jovian Station has failed."

There was a faint intake of breath and a low murmur in the room, but no one knew exactly what he meant. Failed? How?

"We just got word a few minutes ago," Dahlquist continued. "The returns aren't all in, but evidently everyone in the Jovian Station has become violently ill. It isn't known what happened, yet. The station on Jupiter IV lost contact with them; they all seem to be in a state of catatonic shock, except for a few who are delirious."

The murmur in the audience grew louder.

"In addition, they had an accident. The paragravity generator blew out on them. Dr. Jagger talked to the medics on Jupiter IV, and they seemed to have arrived at a tentative solution. Dr. Jagger, if you would, please." He had turned to the medic.

JAGGER, a sour-faced, balding man, stood up. "Not much to it. General opinion

seems to be that when the peegee unit blew, the shock of going into free fall was too much for them. We all know how unnerving it can be to look at that thing out there; if the gravity here went off, and we thought we were falling into it—" He shrugged a l i t t l e...or it might have been a shiver.

"Evidently, something happened to their lights, too. A fourteen-cycle f l i c k e r can send the human brain into a tizzy, because it sets up a reaction against t h e cyclic waves of the cerebrum. Something like that must have happened, and the combined effects were too much for the team." He looked down at his toes for a minute, then looked back up. "They seem to be coming out of it, but none of them is in too good shape yet. I'll keep you posted on their —ah—health."

Jagger sat down, and Dahlquist said: "As those of you on the second shift know, we've checked our peegee unit very carefully. As far as we can tell—without shutting it off—it's functioning perfectly. The lighting system ditto.

"But we're going to keep our eyes open, now that we've been warned. It's unlikely that the accident on the Jovian Station will repeat itself here, but there are other things we have to keep a lookout for."

Fenris listened detachedly while Dr. Dahlquist began outlining safety rules.

ON THE morning of the seventeenth day, James Fenris awoke feeling pleasantly lightheaded. He sang gleefully to himself as he wiped depilatory off his face and donned his uniform.

When he arrived on the upper level, Leland Conger was standing over near the far instrument bank, staring at the rings of Saturn drifting slowly by outside. The planet itself was on the other side of the station at this hour.

When Conger heard Fenris come in, he turned, and there was a queer look in his eyes. "I got to admit it," he said in an odd voice. "That *does* scare me."

"What? Old Saturn?" Fenris grinned. "Haw! You just have to get used to it, that's all. Just get used to it."

He was bluffing, he knew, but it did him good to hear tough-guy Conger admit that he was frightened.

Conger's eyes narrowed, but he said nothing.

Georgia came in, smiling breezily. "Everybody ready to work like fiends today?"

They got started with the r o u t i n e, beginning again where the second shift had left off, when Conger had relieved them. Fenris noticed that Georgia and Conger were whispering in one corner of

the room; it irritated him. He swiveled his head around and saw them talking earnestly. Then, suddenly, Georgia giggled.

Well, well, well, Fenris thought. *She* is *human, after all!*

He began thinking as he checked readings, plugged and unplugged jacks, and made slight alterations in settings.

Why let Conger have all the fun? Why—hell, he was better looking than Conger, any day. Besides, he wasn't afraid of that gal, was he? No, sir; not old Fenris!

He chuckled softly to himself as he thought it over.

He was rather surprised, some minutes later, to look up and find both of them gone. He stood up, bracing himself against a bulkhead. How long had they been gone? He couldn't remember. He frowned, trying to decide if he should do anything, and, if so, what.

The door burst open, suddenly, and Georgia Ellis came in, a sardonic smile on her face.

Leland Conger, following her, said: "But Georgia—"

She stopped and turned. "Go away, little boy; you bother me!" Her soft laugh was more than a trifle harsh. "You'd better get back to work; you've spent enough time doing nothing."

Conger froze in his tracks, then turned and walked over to his checking equipment without another word.

Fenris pretended he hadn't heard; he simply went back to work. On the inside, he was howling with unholy glee.

AT LUNCH time, Conger dropped his tools and stalked out the door. Georgia didn't even give him a passing glance. She went over to where Fenris was pulling plugs out of a magnetogravitic integrator.

"How's everything going, Jim?" she asked, in a low, throaty voice.

"Fine," he said. Then he turned and looked at her; it was the first time she had ever used his first name. Always before, it had been "Fenris".

"Do you know, honey," Fenris said, "you're a very beautiful woman."

Within half a second, she was in his arms, her body pressed closely against his, her mouth seeking his, hungrily.

FENRIS WAS quite pleased with himself. He stood at the broad window looking out at the blackness of space. In the distance was the swinging curve of the Rings, and to his right was the massive bulge of the great planet.

He looked at them, but he didn't see them. His brain was

swirling, his mind going around in slow, easy circles. He ought to be working; he knew that. But what the hell?

He turned around and tried to walk, but somehow, he wasn't quite sure where his feet were. *Tippy-toe, tippy-toe.*

Quite unexpectedly, Conger's face loomed up in front of him. "You're a dirty rat! Fenris, you're a no-good, dirty rat! And a—a *rat*, besides!" He swung with a fist and missed. Then he swung the other fist, and this time he connected.

It wasn't until the pain blazed across Fenris's mind that he realized he was being attacked. With a growl, he leaped for Conger, bearing him to the deck. Over and over they rolled, trading clumsy, ineffectual punches, and trying to get a grip on each other's windpipe.

Somewhere in the room, Georgia Ellis giggled peculiarly.

And that was when the paragravity generator died. Far below, in the "bottom" of the vessel, there was a hiss of sparking, a smell of ozone and burning insulation, and a faint thump as safety relays kicked out. The artificial field generated by the peegee generator collapsed and died. Everything in the Saturn Survey Station became weightless.

It made no difference to Fenris. He realized vaguely that he and Conger were floating in air, but he'd experienced free fall before; it didn't bother him.

IT WAS RATHER difficult to hit Conger in free fall. At first, Fenris found himself tumbling away from the other man in recoil from the blows, slamming himself against the walls and the instrument boards. He'd push himself back into the fray, trying to keep from missing his opponent.

At last, he managed to get a grip on Conger's shirt front. He held on and swung, smashing his fist into the blond man's face.

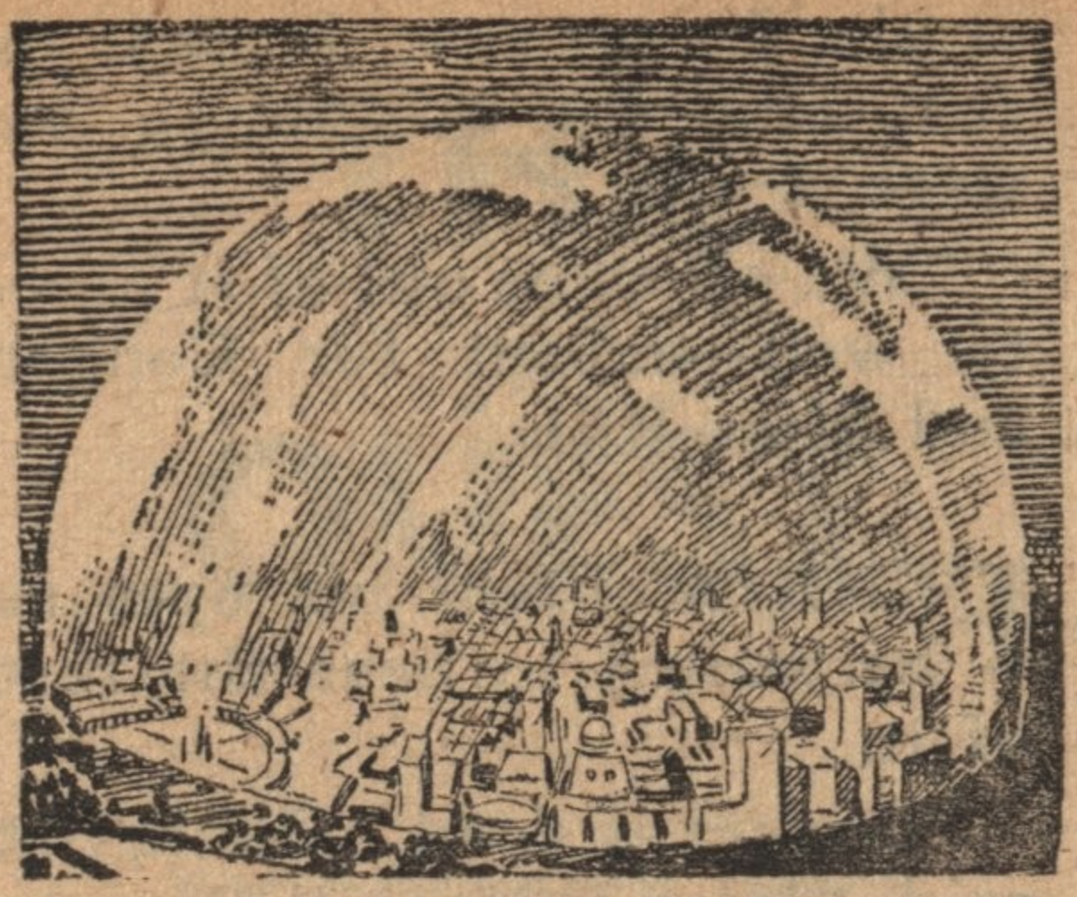
"Kill each other! Go on! Kill! You're both bad men! You deserve it!" It was Georgia's voice, shrill and hysterical. Then she giggled. "You'll both get killed!" This time her voice was eerily calm.

Fenris heard her, but he paid no attention. He was too busy smashing his fist into Conger's face—again and again.

The blond man began to cry and blubber. "Don't! Please don't hit me again! Please! I'm sorry! Please don't!"

And then there was a sudden, barking blast that filled the room for an instant. Something struck the nearby window and left a silvery streak on its hard surface.

Fenris turned his head. It



was Georgia Ellis; she was aiming a heavy-caliber pistol —a 15mm recoil gun used for space maneuvering outside in a suit. But it could also be deadly.

Crack! The pistol spoke again.

"You're both bad men. Bad, bad, *bad!*" And again the gun barked.

Fenris felt Conger jerk in his hand, and his pleadings stopped suddenly. At the same time, they began to twist slowly in the air from the impact of the bullet. Georgia had herself braced with one hand, but even so, her light body rocked and turned with each shot.

Fenris shoved Conger violently, trying to get behind one of the instrument banks, away from the gun.

There was another blast. The bullet hit Fenris, slapping him back against the bulkhead. His skull struck the metal wall.

"FEEL BETTER, Mr. Fenris?" the nurse asked, smiling her professional smile.

"Yeah. Yeah, I'm all right." He wasn't, not by a long shot. *Long shot! Ha. Ha. Funny.* His shoulder hurt and his head throbbed. And it was a real, honest-to-God *ache* this time.

"Just what happened?" he asked for the hundredth time in the twenty-four hours since he'd come to.

"Dr. Dahlquist didn't want to say anything until you felt much better, but he'll be in soon. He'll explain everything." Still smiling, she left the hospital room.

It wasn't more than two minutes later when Dahlquist opened the door. He looked older—much older, but his face had a twisted smile on it.

"Hello, Fenris. The nurse says you're ready for visitors. She says you want to know what happened. Well, the rest of us think we know, and it's about time you did."

"Sit down," Fenris said. "Got a cigaret?"

As Dahlquist stuck the cigaret in his mouth and lit it for him, Fenris wondered what the man was going to say.

How much did they know? Did they know what had gone on in that upper level room? What had happened to Georgia Ellis and Leland Conger?

He wasn't on the Station, that was sure. This was the station on Mimas.

"I SUPPOSE you remember that drunken orgy on the Station?" Dahlquist asked. It was only half questioning.

"Yes," Fenris said in a flat voice. "Most of it."

"That's good. Some of us can't remember a damned thing." He drew a deep breath. "It was caused by the paragravity generator."

Fenris blinked; he hadn't expected this. Dahlquist wasn't making sense. "The generator? How?"

"The instruments told us the story. The gravity field of Saturn, spread out all over the place and varying wildly as we spun around her, was reacting against the paragravity field itself. This induced a fluctuation—a very slight one—in the field from the peegee generator.

"The rest of us have talked it over, and we all agree that, several days ago, we noticed slight throbbing headaches. That throb was caused by the varying intensity of the peegee field. It wasn't enough to notice, consciously, but our brains were aware of it.

"As time went on, the frequency of the vibrations increased. Our brains were being joggled in our heads. Very, very slightly, but enough.

"On Jupiter Station, it threw the team into catatonia before the peegee generator finally blew out under the strain. In our case, it made us feel and act as though we were drunk.

"We all came out of it pretty well—except for Conger and Miss Ellis."

FENRIS closed his eyes as he waited to hear the rest of it.

"Conger is dead," Dahlquist said. "Miss Ellis will have to go back to Earth. She's—insane; violently so."

"I see," said Fenris. His own voice sounded flat and dead.

Dahlquist took a deep breath and let it out. "We all acted pretty crazy, I suppose, but some good may come of it. Now we know that gravity and paragravity fields can, and do react against each other in a way we've never suspected. We may get that interstellar drive, yet."

"Yeah. Yeah."

Dahlquist looked at him. "You look pretty tired. I'll go away and let you rest." He stood up. "You get some sleep now. Relax. I'll want to ask you about what went on up there—as much as you remember, but I'll talk to you later. Right now, you get some sleep."

"Sure. I'll—get some sleep."

But as Dahlquist left, James Fenris knew that his sleep would be filled with nightmares.

And always would be.

THE QUEST

by Abraham Stern

illustrated by ORBAN

The first spaceman was afraid, but he conquered his fear — at a price!

I saw the other side of the moon . . .

THE SUDDEN death of Experimental Space Flight Echelon Captain Jimmy Oakes was a shock to the world. Its very suddenness made it all the more shocking. Still in his twenties, Jimmy Oakes was a legend—a living legend that was truth beyond all imagination. For Oakes was the very first man to fulfill the dream of generations, to shake loose the strong bonds of Mother Earth and penetrate the vast emptiness of the Universe. Jimmy was the first man ever to travel through space.

His flight was all the more spectacular because he flew alone. The experimental tin can Jimmy piloted was a crude one-man affair.

Most of the interior was taken up with the PKS installation, the gravity neutralizer developed by Professor Justinius van der Pokkenstelle. The PKS did away with the need for the high velocities and body-punishing accelerations heretofore deemed necessary for defeating Earth's gravity. But at the same time, in its admittedly crude state of development, it drastically limited the size of the space vehicle as well as its mass and the mass of its load. What with the PKS itself taking up a good part of the available area, and the area occupied by the many data-recording instruments, room was left for only one man with his food, water and oxygen supplies.

The purpose of the flight was twofold: to gather as much information as possible about conditions outside the Earth's atmosphere and to

demonstrate that a man actually could venture into space.

I SAID THAT Jimmy was a legend, and no one ever really knew him, but I think I came the closest. At least he called me friend.

We met as cadets in Basic at the Experimental Space Flight Echelon Academy. The old saying about opposites attracting each other certainly held true in our case. I was a gentleman by breeding and a bit of a scholar by inclination. Frankly, I was not quite the free and easy, devil-may-care type that characterized the cadets of the ESFE and I washed out of Space Flight Training early in the game. However, I was lucky enough to be kept on in the Echelon as an Officer Candidate for ground duty administration.

Oakes, on the other hand, had spent his early years in an orphanage in Akron, Ohio. He had no idea who his parents were, nor whether "Jimmy Oakes" was really his right name. Leaving the orphanage at sixteen, he knocked about the country for a couple of years, windup as an ESFE cadet. His formal schooling was little more than rudimentary but he had the combination of aptitudes and that carried weight in the branch of the Echelon he entered. The Academic Division of the ESFE gave him the education he needed.

EVEN AFTER I washed out of Space Flight Training, Jimmy and I remained friends. Whenever we had a furlough Jimmy would come with me to my family's ranch in southeastern Colorado, only a hundred miles or so from the ESFE installation. Most of the boys, of course, took off to see their own folks; some would head for the big towns with the bright lights and friendly girls. From the kind of life Jimmy had led, it would seem that there was where he would want to spend his free time. But he always came to the ranch to go horseback riding. The first time he came, while we were still Groundhogs in Basic, he was amazed at the horses. He never before had been close enough to touch one.

For thousands and thousands of years the horse had been a servant to man, a vital means of transportation. So vital that horse-stealing had once meant death to the culprit, for to take a man's horse could well mean taking his life. The very importance of the beast was implicit in the name given to its successor, early in the twentieth century, "horseless carriage." And in less than a hundred years the horse had become an obsolete animal, to be seen only in zoos, or on places like ours, where they were ridden for sport.

Jimmy's awe soon wore off.

Before long he was riding as though he were born to the saddle. He liked the animal's jolting motion. "You can really feel you're moving," he said, "not like those simulated space flights."

But he spent a lot of time in a chair at the ranch, too. Our library was well-stocked and Kipling somehow appealed to him. He avidly devoured the swinging verses and tales of violence on obscure borders of a century ago. He would sit engrossed for hours, then suddenly drop the book, stride to the stables, saddle up and gallop off across the prairie.

SHORTLY AFTER we received our commissions, an order came for all flight personnel to report to the ESFE Officers' Club. I was there as an aide, sitting up on the podium behind Space Echelon Major General Jay Y. Travis, Commanding Officer of the ESFE. The CO spoke his piece. The years of hard work since the formation of the Echelon were about to come to fruition.

A spontaneous roar burst from the assembled flight officers. The CO quickly waved them to silence. Theoretically, all possible contingencies had been provided for, he continued; but that was theoretical. When all was said and done, this would still be the first venture for a human being outside the Earth's atmosphere and was therefore to be considered extremel hazardous. Now, he knew of course that each of the men he was addressing had volunteered for service in the Flight Division of the Echelon. Each had successfully completed strenuous tests, and had worked hard to achieve flight status. But in view of the pioneering nature of this enterprise it had to be considered above and beyond the call of duty, and so far this flight the ESFE was asking for a volunteer. Any man would give his name to Lieutenant Esperson.

The CO marched off the stage, and I went down under an avalanche of screaming maniacs clamoring to be signed up. When I finished the list there wasn't a man in the hall who didn't have his name on it.

NOW THE tests began. This was the job of the medicos of the Space Biology Division. Starting with a platoon, the SBD had to narrow the field down to one, the man best fitted all-around. First came the physicals. General condition, response time to given stimuli, reactions under adverse conditions, physiological changes under stress, the works. They made the standards almost impossibly high in order to eliminate as many applicants as possible.

The survivors faced the

psychiatrists next. Questions, questions, questions. Prodding and probing and digging in an effort to pre-determine who was most likely to collapse in that inevitable moment of terrible realization when the pilot came face-to-face with the fact that he was alone out in space.

One by one the men were disqualified until only Jimmy Oakes remained. The Space Flight Surgeon General pronounced him the nearest to a superman that he had ever examined. A special meeting of a board composed of the top brass of the Echelon was held, and Oakes was officially designated as pilot of the MESV I, the first Manned Experimental Space Vehicle. I'm sure the board took one factor into account when it chose Jimmy: he had no family to mourn for him if he never came back.

A few weeks before takeoff, Jimmy was granted a furlough. Of course he came down to the ranch. I got myself a leave, too, and came down with him. Jimmy did the usual things, riding and reading. But as the days went by he became more quiet and thoughtful. I respected his mood and we would ride for hours in silence through the brush.

WE WERE riding, the evening before he was to start back to report for duty at the launching site. It was quiet there on the prairie, quiet and somewhat lonely. The black dome of the sky stretched vast and mysterious over our heads. The full moon came up bathing the ground in its soft white light. The gently rolling country lay for miles around us, a clump of mesquite here and there casting a deep black shadow. Jimmy stopped and looked up at the moon suspended round in the sky. "It's a long way off," he said.

We rode on, listening to the steady clop-clop of the horses' hoofs. Then Jimmy stopped again. "When I was a kid back in that home in Akron, sometimes I would look out of the window when I was supposed to be in bed asleep and I would look up at the moon. I would look up at the moon and I would think my mommy and my daddy are up there, and I wanted to be up there with them. I felt so much alone." Jimmy looked at me and looked away. "I never told this to anyone before."

"Not even the psychiatry boys of the SBD?"

"No. I knew what those skull testers were after, but I didn't tell them; I wanted to make this flight."

"But now you're not so sure."

"I don't know. Look up there, Albie. It's so lonely. I'll be the first. What's it like?" Jimmy hesitated, trying to put his feelings into words. "Albie, I'm scared. The first

time in the history of man, To fly free into space. Me. Me! Albie, it scares me!"

He suddenly wheeled and galloped his horse away in the moonlight. I followed at a slower pace and soon lost him over a rise. I rode to the top and waited. Soon, he turned and cantered back to me. "Okay, now," he said.

THAT MORNING at the launching site at the ESFE base he certainly did not look like a lost, bewildered boy as he stood adjusting his cap beside the sphere-shaped ship. The red sky was just beginning to show over the range of gaunt mountains to the east. The loudspeaker had announced zero minus thirty minutes. Technicians were clambering everywhere through the craft making last minute checks. The space data men were giving their recorders a final caress. The communications boys were doing the same with the radio and telescreens. The space propulsion experts were still calculating and recalculating the efficiency of the fuel mixture and the safety factor of the fuel load. And the space survival crew once more surveyed the food, water and oxygen supplies.

The high brass of the ESPE stood around whispering among themselves. I hovered nervously around Jimmy, who appeared to be the calmest of the lot. He looked like a man with time on his hands awaiting the departure of the daily 6:02 suburban omnicopter.

The loudspeaker boomed out "Zero minus ten minutes." The technicians began to scramble out of the ship away from the flight circle. The brass started to leave, too. General Travis came over to Jimmy. "Soon time, son. Better prepare for takeoff."

"Yes sir."

I patted Jimmy's shoulder in an ineffective attempt to convey my emotions and all I could get out was a choked "Good luck."

He turned to smile at me. "Don't worry about me, Albie."

The CO shook his hand and Jimmy climbed through the hatch. He was now part of the ship. Everyone was silent as the hatch closed over him and everyone was thinking the same thing. Would he ever crawl back out of that hatch alive?

THE SIREN wailed and the loudspeaker sounded the warning for all personnel to clear the take-off area. General Travis and I didn't linger. The flightmaster began his count-down. 30 seconds to zero ... 20 seconds ... 15 ... 10 ... 5, 4, 3, 2, 1, *now!* A faint, whining hum came from the ship so that while the vehicle itself was free of the Earth's pull the man in-

side felt the usual sensations of gravity at ground level. In flight the field could be shifted to any plane tangent to the space-globe's circumference.

Slowly, delicately, the craft rose. Jimmy skillfully controlled the fuel flow to keep the ship rising instead of merely hovering. It shone gold in the sunlight, climbing steadily, accelerating smoothly. At the outer limits of the atmosphere, Jimmy would manipulate the steering jets for directional drive. When the ship reached the desired velocity he would shut off the power and the ship would continue on the voyage, "coasting" through space. The spherical craft rose and rose and was lost to view. If all went well, we would see Jimmy again in ten days. If not...

His mission was to cruise in an orbit that would bring him around the moon and back. A moon landing would be left to a regular expedition, taking advantage of the information gained from this pioneer flight. Communications were to be maintained by radio and television. One TV circuit was hooked up to transmit images of what the camera caught during the lonely voyage, especially of the surface of the moon.

For the first four days, all went well. Jimmy could be seen on the telescreen and could talk with the Communications men back on Earth. But because of the power consumption, these talks were kept to a minimum. All the necessary data was being collected by instrument anyway, and he could report his personal impressions after he landed. The setup was primarily for emergency use, and for the psychological well-being of the pilot.

The ship was on schedule when it swung around behind the moon. Communications ceased abruptly. The mass of the satellite was an effective barrier to the radio waves sent from Jimmy's transmitter.

THE TIME came for the ship to emerge from behind the moon. The Communications crew still could not pick up a signal. For a while there was no uneasiness; allowances had to be made for a possible lag in the spacecraft's schedule but the hours went by and there was still no contact. The Space Biology men and Space Propulsion group privately checked their figures on how much longer the fuel and oxygen supplies might last. No one said anything, but a general feeling of weariness and defeat was in the air. Then ...

The man at the radar screen let loose with an unofficial yelp. A pip! The radar screen showed a bright little point of light. An approaching object, at a range of 100 miles. But was it Jimmy? The radio men

still could not establish contact. The minutes filtered through the sieve of Time. The velocity of the unknown matched the calculated speed of the MESV I. Still no radio contact, but then the television cameras caught the image. Identification was positive. Oakes' ship was coming back!

Soon it was visible in the sky. Slowly, slowly it came down, dainty as a cat walking a fence, and came to rest in the landing circle. A moment's silence, then the hatch opened and Jimmy climbed out. The ESFE went mad. All of us at the site, ground crew, technicians, clerks, brass, we shouted and whooped and danced and hugged each other.

Jimmy Oakes stood for a second there in the landing circle and slowly walked away, as though he had just stepped off the post shuttle bus. I saw his face or a moment, just for a moment, and I saw a look in his eyes. I couldn't make it out, but there was no time to mull it over. The mob made a dash for Jimmy, but the Security Guard knew his business. Forming a ring around him, the security men effectively screened him from the crowd as they bulled their way through to a staff car waiting to take him to Administration.

FIRST HE underwent interrogation about the flight. It didn't last too long and was concerned only with his personal observations and the sensations he experienced. during the voyage. He couldn't send or receive radio signals, he said, because his Communications conked out. Then the Space Biology medicos took over. Except for a slight fatigue everything checked out normal. As was expected, space travel in itself was not harmful to humans.

Then the news released to the world, which had awaited it for fifty years. The world went mad. And looking for a concrete symbol of what had been achieved, it chose Jimmy Oakes. In the old days, he would have been made a god; as it was he became a hero. The ESFE Public Relations Division exploited the favorable reaction and sent Jimmy on tours around the country. It was not deemed advisable to let him outside our borders, although accredited correspondents from other countries were allowed to interview him. Jimmy's face on the telescreen became a familiar sight. The bright, young, handsome face, the picture of every man's hidden desire to play the hero and conquer the universe.

What I saw on his face when he first stepped out of the ship was noticeable on the screen, but apparently only to me. It was disquieting that nobody else seemed to see it. At least, no one men-

tioned it. Maybe I was the only one because I was the only one who was even remotely close to him.

A month of tours and appearances and the Public Relations Division decided to soft-pedal a bit and give the hero a well-deserved rest. They jumped him two ranks to Captain in an all-out ceremony and gave him his leave. He came down to the ranch, and it was the first time I had a chance to get a close look at him since before he made the flight.

WE WENT riding as usual and, like the last time, we rode in silence. But this time the silence was different. That look on his face, now that I saw it close up, was definitely d i s t u r b i n g. He seemed to look right through me—not just preoccupied, like a man who is worried, but as though I weren't even worth noticing. I don't think we said two words to each other during the entire leave.

Jimmy's return to duty meant more traveling and speechmaking. The excitement had not waned; it even grew as word leaked out that a space expedition was being planned. Objective: land on the moon! There were vague vapor trail rumors that Jimmy was to head the expedition. This in itself was a tip-off to the prestige that was now his. There were so many other men who had command experience, and if ever a situation called for experience in command this would be it. But the rumors persisted. Jimmy Oakes was a hero to the public, a hero who was somewhat more than human. He was the man who had actually ventured into space, and he was the only man to lead others into it. And not even the hard-bitten brass of the ESFE could do much to head off the inevitable.

It was months later when he came down to the ranch again for a weekend snatched from his incessant round of public appearances. He still had that look in his eyes but he was more disposed to talk. By this time, the story of the expedition and the probability of his leading it were common knowledge.

IT WAS HE who brought up the subject, not I. We were riding in a remote part of the range. Clouds were gathering in the sky. A storm was coming up. "We better be getting back," I said.

"Plenty of time," he answered. "What's a little rain?"

Then he turned to me abruptly. "You know, there's talk of making me Colonel." He must have seen the surprise on my face. I was really surprised because, while I kept up with most of the vapor-trails on the base, this was the first I had heard of another promotion. "What's the matter?" he said. "Don't

you think I ought to make Colonel?"

I shrugged my shoulders. "Why not?"

"Why not?" he echoed. "Jumped in rank from Lieutenant—Second Lieutenant—to Captain. And now from Captain to Colonel?"

"Well," I said, saying what he evidently wanted me to say, "it is unprecedented."

"Unprecedented. So was my flight." He stopped his horse. "If I could make that first flight alone, why can't I lead this one? I know. No experience. Well, let me tell you something." A distant flash of lightning lit the sky for an instant. Seconds later there was a faint rumble of thunder. I was frightened at that look in Jimmy's eyes. It told me I was less than nothing to him. All men were less than nothing to him. For the first time since I knew Jimmy Oakes I was afraid of him.

It grew darker. Jimmy gestured toward the heavens. "You want to know?" he said. "I'll tell you. I was afraid up there; I was so afraid I was frozen stiff. It's a good thing that most of the work was by automatic control. I looked out into the blackness, and I knew I was alone. I looked back at the Earth far under me and I felt like a man drifting further and further into an unknown sea, with nothing to save him."

Another flash of lightning streaked through the sky. The horses shied nervously and the thunder growled. Jimmy kept on talking. "And then I looked out and saw the moon, big, bigger than anyone ever saw it. And I looked back into the darkness of space and I said to myself, 'Why afraid?' Of all the men in the world you're the one doing this job. You're the best, better than anyone could offer. You're the first. The first man to conquer space!' "

IT WAS GROWING still darker. The lightening flashed and the thunder rumbled but he paid no heed.

"And then I swung around behind the moon. Behind it Do you hear what I did? *I was on the other side of the moon!* I looked out into space, and I looked out to the stars and I was no longer afraid. I was the first man out in space. It's mine and I don't have to be afraid of what's mine. And then do you know what I did? The Communications didn't conk out. I snafued it, on purpose. And I cut the power and I reversed the thrust and I drifted behind the moon longer than the schedule called for. Because I wanted to be alone, really alone, alone in space as I conquered it. The moon, the planets, the stars, the cosmos! All mine. All mine!"

His eyes were now shining, and I couldn't repress a gasp. It got through to him. He

[*Turn To Page* 94]

GALACTIC GAMBLE

by Eando Binder

(Author of "Iron Man")

Illustrated by ORBAN

The governor's only defense against malfeasance was the appeal to a dubious law . . .

WOULD THE law save him in time? If not, would they understand? Would they see there was nothing else he could do with Pi Pollux? Would they let him go on with his program? Or, to call a spade a spade, with his sheer gamble?

Dr. Avery McGull, governor of Pi Pollux, crossed his fingers unscientifically as he saw the jetcopter returning from its long tour. They had cruised the whole planet and had seen everything. He greeted the two men hopefully, but his heart sank at their faces.

"We've seen enough," said Inspector W. W. Harvey, of Planetary Appointments for Galactic Governors. His frosty white eyebrows were drawn close.

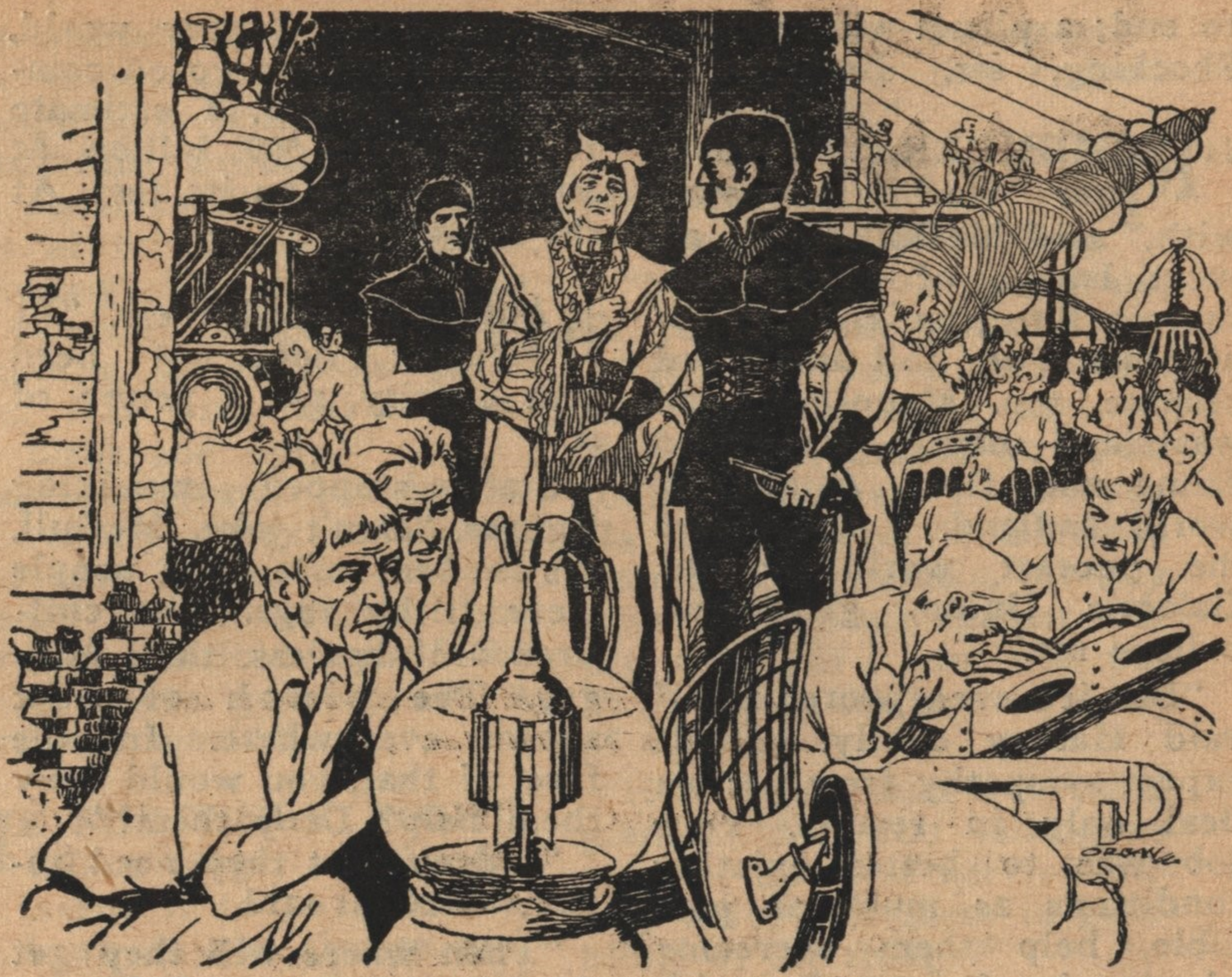
"Plenty," added Examiner Gilbert Statt, of the Space Relief Agency.

"Well," said McGull, rubbing his hands briskly, "then you can see what a good job I've done here, gentlemen."

"Good job?" said Harvey icily. He had the perpetual air of a man who had just stepped out of a deep-freeze; even his voice was brittle like the cracking of ice. "The worst job, sir, of any governor of any world in the entire Union. To the shame of PAGG, you've made this world a shambles, sir."

"A stinking mess," bit in Statt, "that will cost SRA billions to straighten out."

His bony fingers counted out imaginary money in the air, wincingly. "Billions."



The room was a chaos of activity . . .

McGULL wished he were tall and impressive with fiery eyes and a booming voice. But he was short and neutral, with watery pale eyes and a husk in his throat. "You've got this all wrong," he protested. "Let me explain—"

"A killer explaining a murder?" said Harvey frigidly. "I'm serving you notice now that you'll be relieved of duty as governor of Pi Pollux, after I make report at PAGG."

"Wait; you must see this right. There's a certain law on my side—"

Harvey cut him off again, jerking his white mane. "What law, sir? There's no law that can save you from dismissal."

"Yes there is. It's a higher law than yours. The law of—"

But Harvey's ice-water voice drowned him out. "I know the law from A to Z; don't try to bluff me, McGull —it's no good. No law can protect you from the charge of sheer incompetence—at the very least. You've been governor here for ten years, and accomplished the sum total of nothing. Pi Pollux is the most shabby run-down world in the Union. A more miserable planet I never saw. All the cities are slum from end

to end; a planet-wide ghetto. Shocking, sir, disgraceful."

"REMEMBER, this was a poor world to start with," said McGull. "It is almost barren of natural resources like iron, coal, oil, or uranium. Poor soil and a bad climate, too. Mountains and wasteland mainly. Restricted fauna and flora. A sort of world badland. I was given the poorest world in the Galactic Union, gentlemen, believe me."

"But it's even poorer now," said Harvey coldly. "Don't expect sympathy from us: we deal only in results. Your job was to better existing conditions as much as possible, help them overcome their handicaps. Organize things. Teach the people how to make the most of what they had."

"And to find some economic framework," followed Statt's echo, "allowing them to gear into galactic trade. If you had just raised their standard of living one percent, we'd be satisfied. But you instead turned this planet into one vast poorhouse."

"Eighty million souls," Harvey said, the words dripping like sleet, "dragged from misery to worse wretchedness. To an abyss of disaster, sir."

Statt was consulting figures in a notebook, shuddering. "From a poor, needy world, Pi Pollux has been reduced to a beggar world, it will have to go on complete relief now. I estimate it will take 500 billion at least, to set it on its feet. At the least."

McGULL faced them. "Pi Pollux does not need that charity, not a penny of it."

Statt stopped mumbling figures. "Don't joke, McGull, it's in bad taste. The people wear filthy rags. The children are shoeless, thin, hungry. The pinch of want shows everywhere. In the face of that, you would deny them help? Deny them?"

"I deny that they need relief," McGull said.

"Then where will they get the money they need?" demanded Harvey. "How are they suddenly going to earn billions and billions?"

"Well, it comes under that law again," began McGull.

"Law?"

"What law?"

McGull went on, groping for the right words. "There are potential riches behind the illusion of poverty you saw. In one brief moment, it can change...but I'll begin from the beginning, hear me out. Ten years ago, when I first took over my post, I was shocked when I looked over this world, and tabulated what I had to work with. A poor world, with three strikes against it already. Make it a lush farm world?

The available soil was next door to sterile. Mining? Not enough bulk minerals to fill a bathtub. Forestry? There are no trees here, only jungles of brittle reeds. Manufacturing? The people are in the ox-cart stage, without machines. A tourist's paradise? Not with native scenery bleak and ugly."

McGull spread his hands. "In short, every economic road was blocked. I looked myself in the mirror one morning and told myself the truth, I was governor of a worthless world."

HE SUDDENLY POINTED a finger at Harvey. He meant it to be dramatic, but knew it was clumsy and forced. "Tell me, what would you have done in the face of all that?"

"Set them to weaving baskets out of those reeds," Harvey said promptly. "Making pottery out of clay. Carving things out of stone. Anything that would sell in the galactic market."

"Bric-a-brac," nodded Statt, "is a thriving trade and makes money. Makes good money."

"And makes peons," said McGull. "I thought of another answer for these humanoid people, almost twins of Terrans, who by bad luck got a world out of the garbage heap. There was one other way to give them a place in the sun—a new way never tried before in the galaxy. I would use the one resource that remained, the biggest resource of all."

"Such as?" prompted Harvey impatiently.

"The people themselves."

"In what way? Speak up, sir, come to the point."

"Well, by using them in a new way. By using their—" But McGull choked on it, he couldn't quite say it, not yet. He said instead. "I launched them on a big gamble, the way you bet on black against red. My stakes, if I win, will put Pi Pollux in the black and out of the red."

Harvey sent him a freezing glance. "Are you telling us you set up some sort of lottery here? Set them to gambling, of all things?"

"Yes—no." McGull swallowed. "Not gambling the way you mean; a different kind of gamble. It can be win all or lose all. And frankly, gentlemen, I don't know to this day which way it will turn out. What I need is time. *Only* another year, perhaps only a month, a week, a second. I don't know. But time is what I'm begging for, gentlemen. Humbly."

HARVEY was on his feet, and his words fell like smothering snow. "Time to grind them down still lower?"

Statt snapped his notebook shut. "Another year and even SRA won't be able to salvage them. Won't be able."

"Time," begged McGull. "Only six months?"

"Not one month," said Harvey.

"Not one week," said Statt.

"Then just one hour," said McGull.

They stared.

"One hour, gentlemen. Follow me. I want to show you what I mean. Maybe then you'll understand."

The two men looked at each other and shrugged. "I guess we can spare one hour," agreed Harvey.

McGull patted himself mentally, for the classic kid's trick of begging for a dollar, then a quarter, and settling for the dime he wanted in the first place.

Could he still win the big gamble? Would the law save him?

McGull led them out of his dilapidated governor's mansion—it was loosely that, very loosely.. and past the eye-offending, unpainted hovels that leaned at precarious angles. He led them along a shoddy littered dirt street. It mirrored, in itself, all of impoverished Pi Pollux.

"You didn't even teach them common cleanliness," accused Harvey. "The streets are a disgrace, you could have set them to work tidying up their world, at least."

"They're too busy for such trivial matters, now."

"Busy doing what?"

"Doing what? We said what?"

IN SILENT answer, McGull led them into a long low ramshackle building of clay and stone. It was filled with a clashing blend of discordant dins. A hundred or more native men were at work, and it seemed somehow as if it were Earth, in some dingy workshop. There was a clutter of things that crammed all available space and made no immediate sense to the eyes.

"A junk shop?" guessed Harvey, more puzzled than sneering.

"We noticed other places like this," reflected Statt.

"Many of them, in fact. We never got a clear answer from the natives, is it an illegal sweatshop? Is it?"

"A laboratory," waved McGull. "These men are scientists, at work on experimental research of all kinds."

McGull was watching their faces and knew what he would see.

"Really," said Harvey, dropping the word like an icicle.

"Now really," said Statt. "Really."

McGull couldn't blame them. Cluttered, disorganized, this looked like a cartoonist's caricature. The apparatus of chemistry, physics, biology, electronics, botany, and atomics were scattered and intermixed haphazardly.

The Polluxan experimenters were equally overlapped, and seemed in one another's way. There was no pattern or

system; it was a jumbled jigsaw, like a satiric stage-play with mad scientists plotting the destruction of the universe. With the universe utterly safe.

"So that's it," said Statt musingly. "That explains it. I refer to figures I saw, investigating the financial background of Pi Pollux at the home office. In your ten years as governor, under the Galactic Lend Lease Act, you asked for billions in scientific apparatus. And of all kinds from archeology to zoology and all ologies in between."

McGULL NODDED. "Most of my requests for new modern research material were turned down, but it didn't matter really. I settled for any old second-hand stuff. Laboratory hand-me-downs. Even apparatus earmarked for the junkheap. They gladly dumped it here, all I wanted."

Statt was staring. "We thought, of course, you were working with it yourself, doing some good with it for Pi Pollux. But instead, you passed it out to the people. The people?"

The last was in the nature of a gasp.

McGull had one defiant smile left. "Yes, I spread it all over the planet. I set all available men to work in laboratories and workshops such as this. All the men that could be spared from basic labor, such as farming and fishing. I wheedled enough imported food, clothing, and basics from Galactic Staples to release more men for scientific work. About ten million, all told."

"Ten million scientists? Ten million?"

"I know that surprises you," McGull said. "Most worlds, even the biggest, have only a few thousand or tens of thousands of scientists—pure research men, that is—hardly ever a million. But Pi Pollux has ten million."

Harvey spoke with his white brow jerking. "That isn't what surprises me, sir. The whole thing is preposterous, without rhyme or reason. Fantastic is the word, you almighty fool, because the original Planetary Survey of this world showed the natives to be sub-human mentally. An average low IQ of only 55. Their brightest minds, their geniuses, hit no more than 95—below Earth's average. And you're trying to turn this planet into a scientific asset, with ten million *morons?*

McGULL'S aplomb was a thing of beauty, in the face of that scorn, but inside he was sick.

"I decided," he said in empty tones, "that the one chance these people had to make their mark in the galaxy was as a center of advanced science. One chance, and I took it."

"I'll have to report you as

not only incompetent," said Harvey, with genuine pity, "but insane, sir; it adds up no other way. You find a poor, miserable world in need of some saving industry, or means of self support. You could have asked for a billion in carving tools, raw leather, plastic products—anything that would launch them into a simple occupation and a galactic market. But you called for the one thing most *wrong* for them; scientific apparatus for a race of savages."

"Savages," said McGull, "is not quite the right word."

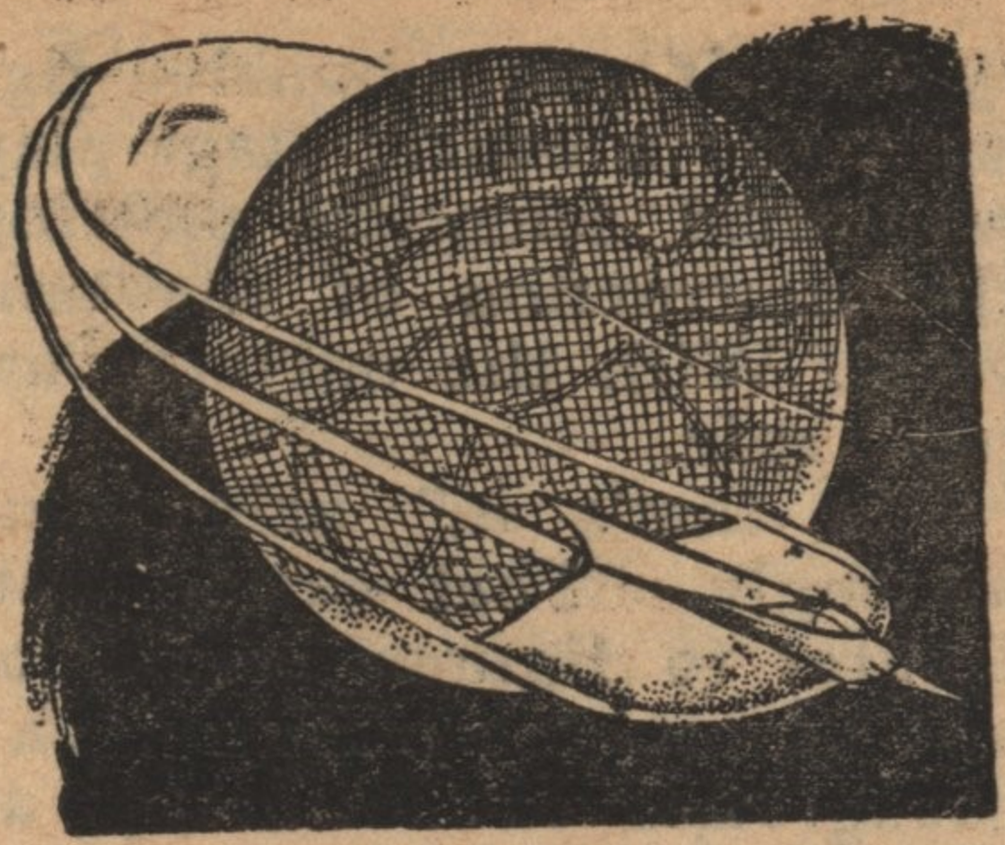
"Nitwits, then. Addlebrains. Call them what you will. Look at them, working at their so-called experiments like stupid, silly oafs."

"Oafs isn't the right word either, but you're getting warm."

McGull knew he was digging his pit deeper with each word. But what did it matter now? Maybe it *was* all insane. He watched one of the Polluxans, who wore a frayed white coat and a childish grin, as he busily dumped chemicals into a row of test tubes stretching aimlessly. Some sizzled or boiled or shot out flames.

"Any luck, Gazzio?" asked McGull in galactic patois, but hopelessly. "Any discovery you're on the track of?"

"Who knows?" shrugged the Polluxan, grinning. "But it's exciting fun, anyway."



McGULL SIGHED. It was all insane, yes; the law had failed him. He turned as two other Polluxans came up, jabbering.

"Poor fellow," Statt was whispering to Harvey. "McGull went clean out of his head when he started this farce."

"Ten million poor misguided people," Harvey nodded, "led by a crazy man, playing at science like chattering apes who don't know an electron from a watermellon—"

"Ah, *apes*," said McGull. "You hit the right word at last."

"What have apes got to do with it?"

"Plenty." McGull turned away from the two Polluxans he had been talking with, and held up an unnamed thing of what seemed rusted old wire twisted around what might be transistors, tied to a lopsided chunk of some metal with clumsy knots of frayed string.

When he let it drop from his hand, it didn't drop.

"Eureka," said McGull, in-

finitely tired now that it was over. "Anti-gravity, gentlemen; given up long ago by galactic genius as a dream. Invented this day by two Polluxans whose combined IQ does not equal either of yours."

"*Apes,*" said Harvey, staring at the thing pushing at the ceiling.

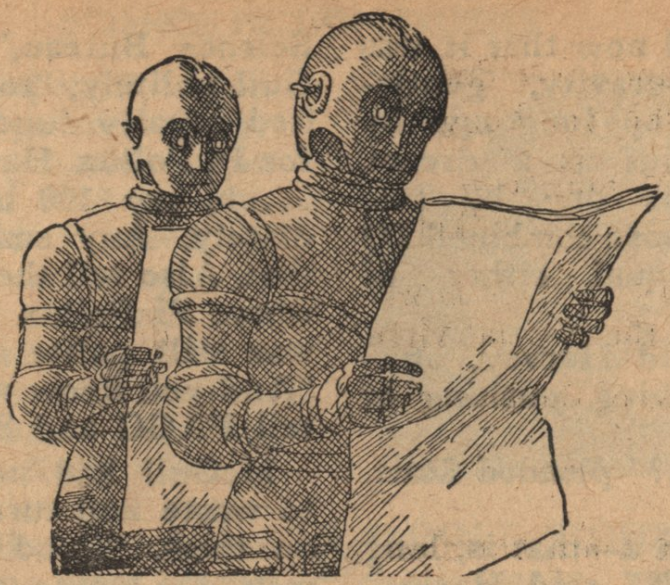
"Apes what?" pleaded Statt. "What?"

"Once upon a—that is, long ago on Earth," said Harvey, "some forgotten man stated that if enough apes pounded away blindly at typewriters for a long enough time, they would eventually write out the Encyclopedia Brittannica, according to a certain law."

"Please notify the Galactic Science Bureau," asked McGull politely, "to have unlimited royalty funds earmarked for Pi Pollux. Have them send ...oh, say 100 billion immediately. Any small sum like that. Also tell the map makers where Pi Pollux is." His tone was still polite as he added. "And you know what you can tell PAGG and SRA."

McGull had no more time to waste and turned his back on them. "Good day, gentlemen. I'm going to be a busy man running one of the richest worlds. We'll make Pi Pollux a center of science, me and my apes. Super science, I should say. I think I'm safe in assuming the Law of Chance won't be repealed."

★



With Reverent Apologies to the Shade of

Sir William Gilbert

L. Sprague de Camp

Tells us Something About

All The Latest Improvements

A metal robot, I—
    A thing of shafts and bearings,
    Of cables, gears, and fairings,
And voltage ever high—
    And voltage ever high!

My positronic brain
    Is ever at your service;
    You cannot make me nervous,
Or call on me in vain—
    Or call on me in vain!

Are you of human labor sick?
    I'll work for you (clankety-clank!)
Do you the unions yearn to kick?
    I'll serve in lieu (clankety-clank!)

I won't demand more dough,
I'll never strike, you know,

Nor do I buy, and so—
Alas for you! (clankety-clank!)

But if military potency is wanted,
I've got the martial virtues cut and dried;

The smartness of the leathernecks so vaunted
Is nought my clockwork nicety beside!

But though I am a wonder on the drill-ground,
In battle I am harmless and inert—

Because of my conditioning I'm will-bound
And cannot do a human being hurt!

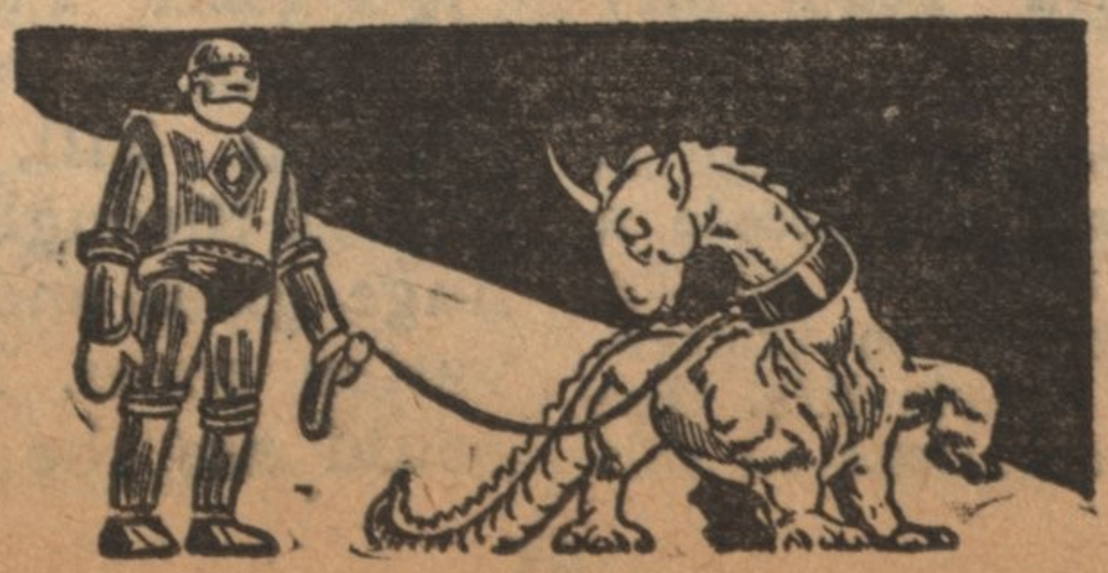
And if you want a domestic slave,
I'll wave the feather-duster;

I'll burn the steak you specially crave,
And I'll break the vase you were trying to save
Like a human furntiture-buster!

I can beat up your house as well as she,
Without a trace of fluster!

A metal robot, I—
A thing of shafts and bearings,
Of cables, gears, and fairings,

And voltage ever high—
And voltage ever high!



The retreat from science was backed up by the newest scientific devices. It was an eletronic computer which revealed that the risks involved in moon-flight were too great . . .

DARK OF THE MOON

by Bryce Walton

(illustrated by Emsh)

LATER, PEARSON decided it was better that he got the news from the street rather than direct from Major-General Wentworth. Getting it that way was a shock; the other way he would have killed Wentworth. As it was, Pearson walked off some of the jolt, and drown some more of it in gin and tonics.

MOONFLIGHT CANCELLED

Equacity, Aug. 12 (INS) —— One of Dr. Eden Crowell's first acts upon taking office as President of the United States, was to announce today the cancellation of the U.S. proposed Moonflight Project, scheduled to take place here tonight. "It is cancelled," President Crowell stated at his first Washington press conference, "until farther notice."

Pearson had to walk awhile before he could read any more.

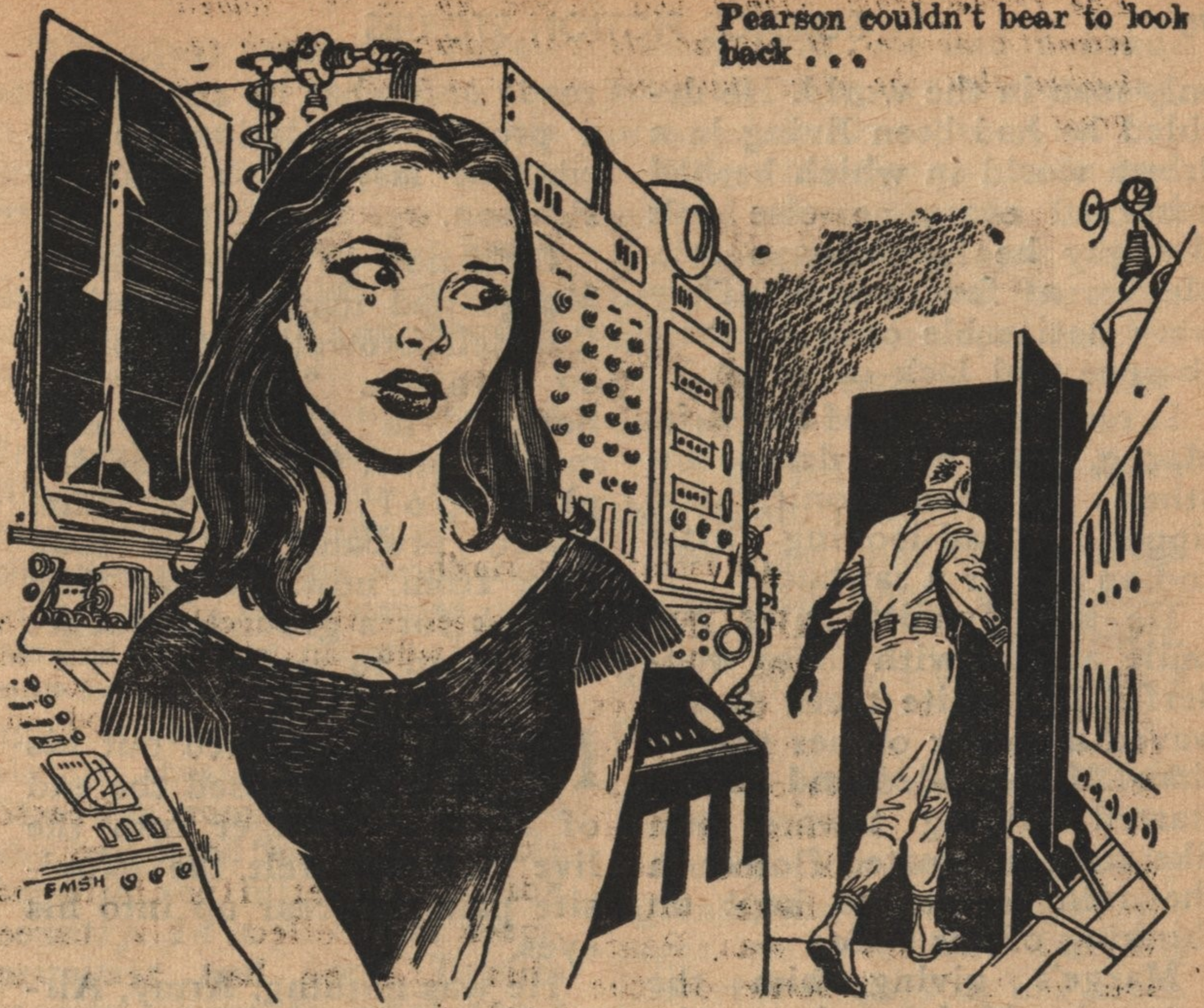
President Crowell is quoted as saying. "I promised the people a new policy of national sanity, economy and a return to Conservative faith in a simple life. One of my first considerations in this respect is the cancellation of certain wild, anxiety-provoking and impious projects launched without the consent of the governed, such as *Project Moon* . . ."

There was more. Pearson couldn't read the rest. It didn't matter. His flight had been cancelled; his career, his life, he had been cancelled.

He walked in a state of shock through the equatorial city that he had mushroomed up near the Project Base. His thick body blundered through the shadows of sidestreets, bumped into quiet natives and sweating irritated tourists.

I'm dead, he thought. Numbed shocked turned to hate for high political power, out of sight, out of reach.

AFTER THAT, in a cabana on the side of a lush tropical hill, he sat and looked through the panes of a huge glass and bamboo observation room. From there, he could see the graceful gleam



of the rocket on a clear night. Tonight, it wasn't clear; and anyway, no one was looking.

He listened to the bongo drums without hearing them. He watched the contortings of a belly-dancer without seeing her. No one had mentioned the cancellation of Project Moon *The fact is, he thought oddly, no one gives a damm if it was cancelled. No one has given a damm all along.*

It was after eleven. Pearson had absorbed a lot of gin and tonics, he ordered two more. His eyes felt swollen, his stomach was stale, he felt **bitterness** and emptiness mingling in a nasty melange.

A red-faced tourist and a thin blonde woman were sitting at the table next to Pearson. **Pearson** held up the newspaper. "What do you think of that?" he asked.

The tourist shrugged. "I sure voted for Crowell. He'll clean up things."

Pearson mumbled something and slammed the paper back on his own table. He heard the woman whisper. "He doesn't look like a radical, does he?"

IT WAS THEN that Pearson began feeling like the

only man in the world. He decided he had been living in a dream world in which he had imagined everyone else felt the way he had always felt. Maybe a few cared. They were noticeable only in their absence and lack of voice.

It reminded him of his wife, Marge, and he ordered another gin and tonic, and tipped a sad-looking little Indian waiter a sawbuck.

He saw Juanita enter and smile at him with those wonderful big white teeth as she waved a corner of her scarlet shawl. He nodded and as she started gliding toward him like some antimated flower in the rain forest, he kept on thinking of his wife.

Marge's giving him the gate should have been the big tip-off. Ten years Pearson had been working with the Project, helping with design, testing, putting that first orbital rocket above the ionosphere. Ten years waiting for the Moon. Ten years without Marge. Ten years ago she had made the issue clear. "I don't want to invest in a zero future."

Ever since he had "checked out" in a Jet Dragon, when he was 19 years old, Pearson had known where he was heading. For the Moon, and whatever was beyond the Moon. He hadn't intended that to be his whole life, but Marge had insisted that it be or nothing. He had made the only choice he could have made and what he considered a promising relationship ended. The last of it's kind for Pearson.

Only now he had no choice. Marge had married a retired Colonel. Crowell had grounded Pearson. "Until further notice" in Crowell's book meant "until Crowell was displaced politically." That would probably be a long time from now. Longer than it took for a grounded rocket man to go to seed.

PEARSON smashed out his cigaret. He pressed the end of his blunt finger into the live coal and felt the exquisite pain run cear up into his eyes.

He was nothing. Army, Airforce and Navy brass, scientists and all, were being retired en masse, with the minimizing of world tensions. In a little while now, he would be retired with a nice fat pension. It woud be a long funeral, but he had the money for a first rate ceremonial.

And he was only forty-three.

Juanita sat close to him and he ordered her a drink. She leaned close and fragrantly to him, looked at him steadily, her large dark eyes that had miraculous range from softness to blackest intensity, brushing his face with uninhabited concern.

She said, speaking English with thick difficulty. "You so loaded up."

"I've just started, sweetheart."

Her fingers moved over his jaw. "Tell me what is go wrong, baby."

He showed her the headlines. She laughed without embarrassment. "You know I no read things."

He grinned wryly and dropped the paper on the floor. A lot of people couldn't even read the words spelling out the end of his wonderful pipe-dream, but Juanita was hardly like the others. In his way he loved her. In her, such ignorance was like a child's—simple, basic, unpretentious. She was mostly Indian, and she had lived most of her life high in the hills of the back country. In mysterious ways, primitive and dark, Juanita seemed closer to what space meant to Pearson than most others who wore the trappings of technology.

SHE WAS nothing like Marge. Juanita loved Pearson with complete abandon, without asking anything in return, not even that he be around the next day. She had only gazed softly at him when he had told her he was going to pilot the first rocket to the Moon.

They drank for three hours. The bongo drums banged into the distant unreality. The belly-dancer wriggled her way into a perspiring misty nowhere.

"Let's get out of here," he finally said. He had a headache building up threatening pressure behind his eyes.

When they got outside and walked through the turgid fragrance of the tropic night, he wanted to stand, bare his face to the moon, roar out his feverish bitterness and frustration.

"Why they stop you from the Moon, baby?"

"Be glad you could never understand why, sweetheart. I don't think I do myself. And anyway, that doesn't matter."

"They should let you go to Moon, baby."

He pulled her tightly against him and caught the eager smile as she felt his powerful fingers in her arms.

"Who stop you, baby?"

"Most people. The voters who elected Crowell. The world's stale, it's getting creaky in the joints. The new conservatism, that's the name they give it."

SHE PUT her face against his chest. "You should have the moon, baby, if you want it. I know what it is."

"Sure you do," he said. They stood with their arms around one another at the end of an unlighted street. A few blocks away he could hear the unending chorus of curs, and mongrel dogs yapping and howling, making a bedlam out of the night the

way dogs did in every South American town Pearson had ever been in.

He felt like crying. He knew that Juanita would understand that, the way she understood all real passion.

"They're all scared monkeys," he said. "They can't help it. There're just scared, confused, driven backward. Go back to the simple life of faith, back to nature, that's what it really amounts to. And they hate anyone else who wants to go out there, the other way. It scares them, and then they hate it."

The hell with them, he thought. *The hell with every one of them.*

They walked toward Pearson's apartment, overlooking the river. He had left the Military Base and chosen the apartment because he could see the rocket from there if the night was clear.

Night after night he had lain there watching the dun colored skin of the rocket mushrooming in the lush jungled night sometimes when the moon was clear, like an unfolding flower, like one of those night - blooming flowers that open to the moon.

WHEN HE was with Juanita, he thought of things in that way. Juanita made him feel closer to a lot of things. But Juanita couldn't make him feel differently about the cancelled moon-flight.

"Maybe they let you go later."

He shook his head. "Not for a long time, not until after my time. I know now how much I've worried about this, not wanting to face the way it might turn out. They've stalled and stalled. That rocket could have been to the moon and back two years ago. And they had to wait until a few hours before the blast-off!"

He restrained an impulse to drive his fist through the wall of the hut. A mongrel dog's yellow eyes blinked out at him from the darkness beneath the shack. Abruptly he turned. He called to Juanita, without looking back. "Wait for me sweetheart."

"I wait."

He started running.

"You go to Moon now?"

He kept on running, feeling the sweat streaming down under his uniform jacket.

MAJOR-GENERAL Wentworth, Chief of the Project, had waved his authoritative wand and caused to be erected in the jungle a fabulous villa. A sluggish river infested with malartial mosquitoes oozed past it and the area was thick with jungle. But Wentworth's "organic structure" as he called it was a thing apart.

The house was dark. Wentworth was a stickler for

e a r l y - to - bed - e a r l y - to-rise and every other cliche and platitude beloved by the new conservative. Pearson had always felt the basic antagonism toward Wentworth, and had avoided him socially when possible. Now, too late, Pearson realized he should not have been naive and a-political, that he should have fought the Wentworths before they hanged him.

A frightened native servant in a pair of Bermuda shorts whispered that Major-General Wentworth was sleeping, and that—

Pearson went on into the huge living room of potted ferns and palms and fantastic tropical blossoms. Air-conditioning wafted gently cool air and Pearson opened his jacket to it. An electronic net of some sort killed any mosquito venturing within a hundred yards of Wentworth's villa.

WENTWORTH appeared, belting an official Air Force green dressing gown around his slim, well-preserved figure that almost forced you to overlook his advancing middle-age. His face was a strictly paternal one. Stern with slighters of sacred law and order; patient with those who tried to conform; soft, even gentle, with the pious conformists. Absolutely unforgiving to innovators.

His sharp face could separate into distant chiseled parts called for by ten rigid emotions. One of these was the smile of a judge, always willing to hear the other side of the question, even Pärson's. "You appear to want to see me Major," Wentworth said.

"I'd like to strangle you, too; but I'm not going to."

Wentworth shrugged, ordered the servant to prepare some coffee for Major Pearson. The servant ran out.

Wentworth offered a chair but Pearson ignored it. He stood in the middle of the room, looking at Wentworth as though Wentworth were a book he had a long time and had neglected to read.

Wentworth sat down. "I've expected you, Major, but I was hoping you would see me tomorrow. I've had a rough day."

"Closing out the Project must have broken your heart."

Wentworth caressed a mole near his left eye. "I know how disappointing it is to you," he said. "I've never denied my feelings about the Project. Although I haven't been in agreement with it, still I've done my best to see the Project through. And I did see it through; everything was ready when the cancellation order came in. You're here to raise hell with me. But I had nothing to do with the President's order."

"YOU VOTED for Crowell and that bunch of

medieval monks he calls his cabinet."

"Major, you're drunk!"

"You're a back-peddling coward," Pearson said; "you and all the rest of them."

Wentworth stood up. "I'll be glad to talk with you when you've sobered up."

"I won't be talking to you again, you regressive bustard."

Wentworth shrugged and sat down again. "You want to make me a scrapegoat, a whipping boy; go ahead, Major. You may use me, if you like, as a symbol of social trend."

Pearson stepped toward Wentworth. "All I've ever wanted was to push rockets up as far as they could go. I never thought much about why. I figured I was human like most other people. Get rid of curiosity, adventure, the desire to push out, what's left? My dream was the dream of a lot of people. But you and the Crowells and his cowled clerks got hold of the reins, instilling fear, playing on anxiety. Making people so anxious to hold on to what little plot of security they have, they're afraid even to think of venturing any farther. Let alone to the Moon, or beyond the Moon. You guys are afraid, scared silly into this medieval attitude. You hate science; it's progressive. You hate change. You hate innovators. To you guys, innovators are the same as devils in the middle ages."

"In a way you're right, Major. You happen to be a minority."

THAT WAS true, Pearson thought. Wentworth had won; he didn't need to be upset, didn't even need to argue any more.

Wentworth said, "I didn't vote for Crowell and his Neo-Conservatives. Maybe I *am* afraid of any further expansion, Major. Many people are afraid; democratically, we must allow the fearful majority to express itself—and they have. Crowell was elected because of his political and theological beliefs, and Crowell will return us to a simple, cooperative faith in communal simplicity, and an end of blind and senseless drive toward—what? Space? A cold emptiness that can only remind the already anxious of a greater and greater and colder meaningless vacuum. Science, technology, the cold and material. These things have been alienating man from the security, the binding ties of natural law."

Wentworth leaned forward. His eyes were shining. "People don't want to go into space, Major. They don't want even to look into it. They don't want to think about something that is unthinkable, endless, meaningless. Something that can only remind them that everything is running to doom, inevitably burning up. Maybe some day

they can forget it entirely. Only a few ever were interested in your fantasy speculations about space travel. Only a comparative few ever read the literature, saw its celebrating movies. Why the lack of interest? *Fear.* When the first space station, unmaned, went up, that should have been history's greatest moment. How many people really cared?

"Not many, Major. Psychologically they were turning the other way and saying, *stop, leave us alone, we've had enough.* Only space is out there, Major. Only more meaningless vistas to make finite man more frightened, more insecure and laden with deeper anxiety."

PEARSON ignored the cup of coffee. He watched Wentworth calmly spooning sugar into his while the air-conditioning murmured.

Wentworth looked up. "And anyway, no human made the decision."

"That's being a little harsh, even on Crowell," Pearson said.

"I mean that literally: No human made the decision."

"Who made it? God?"

"Not directly; the decision was made by Crowell's computors."

"Computors!" Pearson whispered.

"Read the papers tomorrow. Crowell's statements at the press conference in detail. All data was submitted to the computor in Washington. The computor decided no human being could get to the moon and back alive. Odds too great."

It wasn't even fantastic any more, Pearson thought. He and Wentworth didn't even speak the same language. "They could have done that years ago. The odds have always been against it. When in hell have odds ever stopped a man—"

Now, Major. *Now* they do. Call Crowell's policy anything you like. It is ultra-conservative; it's also humanitarian. The computor says that no man could get to the moon and back alive given all the present variables and unpredictable elements. And as long as Crowell and his followers are in office, no man will ever try it."

"WHAT DID the computor decide would stop me?"

"No one factor; all the combined variables, chance risks, unpredictables. The chance of a mistake in pre-calculation for example."

"No one ever denied it was a risk. Living's a risk," Pearson said; "anything worth doing is a risk."

"Yes, but in this case the computor has proven the odds too great, Major. Such odds make this moon venture a child's game, a longing for

risk for risk's sake. Danger for danger's sake. With the possibility of success so slim, no reasonable man would attempt it."

"Would reasonable men have defended the Alamo?" Pearson said. What does reason have to do with this?"

"Everything, Major; Crowell's age is a new age of reason."

"The hell with you," Pearson said. "It won't last. It's just a temporary special disease. We've had them before. But I don't want to wait around for the end of it. You're dead. If you want to rationalize your own death by stagnation, that's your particular kind of funeral. What if they'd had a computor figuring Columbus' odds? Or the odds against Washington crossing the Delware. Or even the odds against a man when he decided to come down out of the trees and try walking around on the ground?"

Wentworth smiled. "We all would probably have been better off Major."

Pearson managed a half-choked laugh. "The noble savage. Back to Arcadia, the Garden of Eden. If ignorance is bliss, you should be a charter member."

Pearson didn't go out the front door, but he walked past Wentworth, through the kitchen, and out into the back yard. He skirted the swimming pool and headed for the power house. Wentworth was yelling at him.

He short-circuited the power. The lights in Wentworth's house went out. The air-conditioning went off. He could hear Wentworth screaming in the darkness.

Pearson yelled. "Back to nature, Wentworth. No lights, no air-conditioning. And those mosquitoes, they're coming in for a landing. They're mad as hell and they're going to make up for lost time!"

"By God, Major, you've gone too far."

WHEN PEARSON got to the river, he was breathing easier. The water was placid on the moonlight and he heard a gator bellow a little way down the stream. The light in his apartment was on and his radio was playing. Juanita was waiting up for him.

He backed the Jeep out from under the awning next to the side of the house, then he called up to Juanita. Her black hair appeared, the bright slash of scarf and the dip of a golden shoulder.

"How about a moonlight ride, sweetheart?" Pearson said.

"Oh fun, baby!" She appeared almost immediately on the back porch, running easily, and then she was in the Jeep snuggling up to him.

Later, as Pearson pushed

the Jeep with a brooding intensity along the silvery road, Juanita, seeing that this wasn't the expected fun ride, sat in silence.

The road was like a small silver stream flowing between the high thick banks of green. Bright plummage of birds and flowers flashed among the leaves.

"Don't say anything to anyone; just don't say anything," Pearson cautioned her.

"I no say anything."

"No matter what happens. Promise?"

"I promise, baby."

HER FACE resembled an ancient Inca mask under the touch of the moon's light. "My Mother sang a song," she said, "sometimes. Song older than forest. Song to great and mighty Ome Teotl, God of the Fire that create, God of fire that kill. I come to you to die in your fire. Take me, Ome Teotle. Take me and love me last of all in your arms of fire."

Pearson was thinking of the computor somewhere in Washington, or who knew where. Panels of gleaming plastic, row on rows of switches and dials and little red winking lights. Damned electronic computors with brains of metal and glass, telling men they couldn't go to the moon. Like some ancient Shaman telling people what was taboo.

Don't open the door. We're scared of what lies on the other side. Set the dials of your computors, boys, give it all the necessary data and set the dials to represent all the factors. Brief the Computor high priest. Give it the formulas representing extremes of doubt and probability. Set it to thinking. A snowstorm of thinking electrons and out comes the figures telling how no human being in a rocket can ever get out the door and back in again.

But how far would it go now? What was the scope of such a theocrat? Where would it stop? Men like Crowell and Wentworth, and a God named Status Quo, with their high priest computors assuring that from now on man would never gamble when the odds were too big.

HE PLUNGED the Jeep along the winding road. Cottages peeked out of jungle clearings and the swaying girdles of banana and lemon trees. Parrots, toucans, palm and guaga trees glistened and screeched as he passed. Beyond the Jeep motor he could hear the ancient forest singing, every leaf a bird, every leaf a cicada, every leaf a sound, as Juanita had said once. And in the air the lonely smell of sweet grass, trampled undergrowth, vanilla and hot sultry wood. And Juanita humming an old old song that had been borne in

the forest. He thought of how she had the river on her lips and the forest in her heart.

In a few weeks the entire giant project with its intricate installations, its blockhouses and radar and the great rocket itself, could be choked, buried, forgotten. And the forest song would sing over it all as though none of it had ever been here.

The guards at the gate, seeing Major Pearson, opened the gate and stood with impassive faces under shiny white helmets.

"This is a reporter," Pearson said. "She's flying out in the morning and she's doing a story on the end of the project."

Not that he needed to explain his action. He just didn't want the guards informing Wentworth if he could help it.

THE JEEP curved along the macadam past the project installations. He didn't say anything as he drove past the concrete igloos, the blockhouses with narrow slits of windows and glass many inches thick. Over the underground fuel storage cellars, and between the cobweb steelwork of towers and wires, and the sleeping eyes of cameras and theodolites that had grown tired of keeping awake for the launching that would never come.

Far to the right he saw the rocket rising in abandoned nakedness, a shiny ghost of something dead that had never quite been born, like a new born baby that had never breathed.

Dish antennae of radar turned up in stillness like dry palms waiting for rain.

The guards at the gate into the control blockhouse nodded without feeling as they recognized Major Pearson. Pearson the jet-hero, the guy who put the first orbital rocket up there circling the world. And in case anybody remembered, it was still up there circling round and round, like the scared people below, like another goldfish swimming round and round in its bowl.

Inside the blockhouse, Juanita's eyes widened at the display of technological wonders. Her red lips opened slightly.

Pearson put his arm around her waist as he pointed out the dials that marked the time, and he shoved her where the needle would be, and the buttons to push. "Can you remember?"

"Yes," she whispered. "I remember."

He went over it again and she repeated the instructions, and she remembered perfectly.

He held her close against him. He could feel her thighs against him. He shut his eyes and felt of her as though it were the earth itself he embraced.

AN INDIAN girl, a primitive Indian girl who wore only the most superficial trappings of the modern show, through which her simple passionate heart shone like a firefly at night. An illiterate Indian girl standing here in a complex of technological mass of equipment even the smallest isolated item of which would be as imcomprehensible to her as it would have been to someone before the discovery of fire. But she could press the buttons just as well. She had no understanding of the remotest principle of the controls, the panel in the blockhouse, but she understood what Pearson had to do better than the guys who had built it all and ran away. Ran away like a pack of yelping dogs to the safety and security and whatever else it was in the goldfish bowl they loved better.

He told her goodbye and kissed her. The passion had gone before, he knew, as he turned and started for the door.

"Baby," she whispered. He turned to look at her again. She had never spoken to him in anything but her crude English before. She sounded like someone else now. Someone he had never quite known.

"Y el oscilar de luces y la sombra mas dura y tus palabras de avenida fluvial, tan pronto llegas y te fuiste. Y quieres poner a flote mi vida, Y solo preparas mi muerte. Y la muerte de esperar, y morir de verte lejos."

There were tears in her eyes. He ran out of the blockhouse, ran on past the Jeep toward the rocket.

And he knew that however far he went, wherever he went from here out there, her face, her eyes, those last words of Juanita's would be all he would remember:.."*and your words a street like a river, so quickly you come and you went away. And seek to launch my life and you only prepare my death. And the death from waiting and the dying from seeing you far away.*"

A Juanita he hadn't really known. Now he would never have a chance to know her. Something maybe he had never known all his life but had wanted to know. A woman without pretense, the river on her lips and the forest in her heart. Now he knew what she was. Something that gave of herself like rain, like forest gave itself in fruit and flowers. Like the sky gives its blues, its suns and stars.

She wanted me to go, he thought, *and yet she was the only one who really understood, the only one who really loved me, and the only one I ever really loved.*

Juanita was life, and his road wound up and out from Juanita, because she gave wings to the dream as she said goodby.

THEY HAD taken care of everything of course. Pumped in the fuel, set the electronic brains, set its valves and pumps and sensitized nerves.

And then it was zero minus a few seconds, but Pearson didn't count the seconds. Somewhere Juanita pushed three buttons, and the dew damp jungle for miles around was transformed by flame, and a screaming roar rustled the leaves and silenced the beasts. Eyes cringed, and waves of heat beat against naked skin. Screams pierced eardrums, and needling vibrations vaulted through skulls.

A trail of gold-leafed flame died in the sky.

WENTWORTH managed to contact Pearson once. It can be said of Wentworth that as the rocket flame warned him of Pearson's heresy, he did everything in his power to save Pearson.

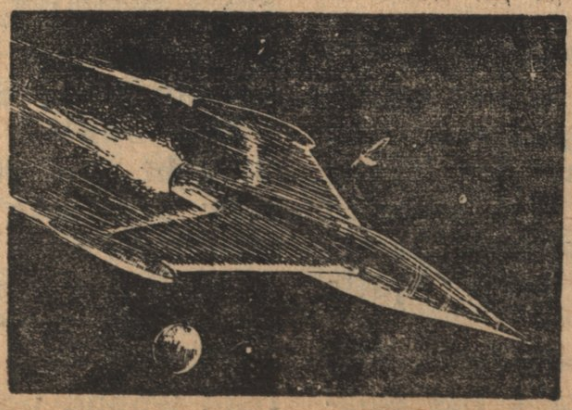
The entire flight had been prearranged, in order to put the ship into an orbit calculated long in advance. Wentworth monitered by radar and observatories, and called in every staff member available on short notice, kept up a continous check of the rocket's position and velocity with radio correcting signals to the automatic pilot.

"Major, Major," Wentworth said, "the computor was right."

Only a few words and a laugh came back from Pearson "You know what you can do with your computors, Wentworth. Your computor never figured one thing out —me. You see, I never intended to stop on the Moon. And I never intended to come back."

He never did.

★



Julie's long-sleep made her a national figure . . .

TO HAVE and to HOLD NOT

by Winston K. Marks

(Author of "The Fission of Mrs. Custer")

(illustrated by ORBAN)

Is it not the mission of medicine to relieve pain for the dying, as well as for those who might recover. And who can be postive that death is inevitable in some cases?

"KILL ME, Tony! For God's sake, not just another shot—kill me! Kill me if you love meeeeeeee, Toneeeeeee—" she broke off sobbing and tearing at the long strands of yellow silk that tumbled from her pillow like a golden shower.

It stabbed her again, near the middle of the spine, radiating rockets of pain throughout her trembling body. Her eyes tightened, tears obscuring her vision, but she knew he was still there, pale and tortured by her pleading.

He spoke softly, his voice husky and broken. "This—isn't just another shot, Julie.

This one will really help."

"No it won't! None of them do." She rolled her head hysterically from side to side. "Tony, Tony, this is the 21st century. We don't let animals suffer; why do I have to lie here like this? Why? Why? *Why?*"

She heard him move to the door of her private room and close it. Against orders; interns were not supposed to close the door unless a nurse were present.

"Listen to me, darling," he said returning and cradling her throbbing head in his arms. "Try to listen to me and understand. I'm going to hurt you, terribly, and you must lie very still, darling. Very still. You mustn't scream. If they catch us they'll administer an antidote, and they'll put me in prison where I can't help you again."

"I'll lie still. Very still, Tony. I won't make a sound —but hurry, Tony. Oh please hurry!"

"Not a sound, Julie. We must have ten minutes after I make the injection. Just ten minutes, Julie, then it will be too late; do you understand, darling?"

"Yes! Yes! Please hurry!"

SHE FELT him draw down the bedcloths, grasp her by a hip and roll her over gently. She gasped as the motion multiplied the pain twofold.

"Quiet, darling. I know it's r o u g h, b u t you mustn't scream," he urged hoarsely.

She gouged the tears from her right eye. Tony w a s studying the X-ray of her spine. He laid it on the bed beside her and parted the white gown that opened down her back. The hypodermic in his hand was large, and the needle seemed murderously long, but she didn't care. She had talked him into it at last after days of pleading. Ten minutes more she could stand, b u t not an indefinite hell of this torment.

"I'm sorry I can't localize the skin," he apologized. "There isn't time. Let all the air out of your lungs, darling; that's right."

Unfortunately, her p a i n abated just as the needle sought the precise point between vertebrae and struck deeply into her spinal column.

The shock of the puncture was more than she could stand. She screamed with the little air left in her lungs, sucked a deep breath and screamed again.

"No! No!" h e pleaded. "Hold still! I must give it all to you!"

THE SEAR was even worse than her original pain. As the plunger descended she felt the pressing against the base of her brain, amplifying her suffering with every heartbeat. Then it faded, as though her hurt were no

longer a living fluid thing, but rather a thick jelly with which she was stuffed tight like a sausage.

It was still there, but she could ignore it, withdraw her brain from it as she would her finger from a hot stove. There were still the horrible pressure and the source of pain, but she shrank back and found refuge from them, leaving her body to its own flaming hell.

She didn't feel the needle withdrawn, and only the fact that she now faced the pastel ceiling again told her that he had turned her to her back.

"Thanks, Tony," she said thickly.

But he was looking at the door, empty, empty hypo syringe in hand. At the lower range of her vision Julie could see the floor nurse, heavy, big-breasted and stern. "Why was this door closed? Who screamed?"

Other footsteps were sounding down the hall. Old doctor Porter came in. Julie saw his eyes glance at her, then he faced Tony. "What have you done, doctor? I ordered no injections for Miss Raeburn."

HE STEPPED over and grasped the empty ampoule from the bedside table. "Comatone! Ten cc's! By what authority..?"

"I assumed the authority, doctor," Tony said quietly.

Dr. Porter turned to the nurse. "Prepare a syringe, 5 cc. Comatone neutralizer. Move!"

He faced Tony again. "Miss Raeburn is no mental patient, doctor, and even if she were you had no right.."

Julie felt her eyes bulging from their sockets, but the pain was remote now. She watched the muscles tighten along Tony's jaw. He cut off Dr. Porter, "What right do you have to force a patient to remain conscious to a pain like Miss Raeburn is suffering? A fine dammed therapist you are! Arrest the growth in her spine then tell her it's inoperable!"

Both medics kept glancing at their watches, and Julie remembered what Tony had said about, ten minutes'.

Dr. Porter said, "Since you seem to have adopted this case, you should know that the patient is beyond the help of sedation. Additional narcotics would be fatal."

Tony snapped, "Did you think her heart would stand that pain indefinitely? She hasn't slept in 36 hours."

"Are you suggesting that we should have let the tumor continue its fatal growth?" Porter demanded. "We did our best. The growth receded beyond the reach of our radiation, you know that. Now nothing short of..of euthanasia can give her release. I suppose the patient has been

begging you as she did me. She is very beautiful. I can almost understand why you were willing to break your vows, doctor."

Tony balled his fist. "I have not broken my vows."

PORTER shook his head. "Check your pharmacopoeia, doctor. Comatone shock may be administered only in the extreme, and to mental patients only. The antidote must be at hand and injected within six minutes to assure recovery."

"Read a little further, Dr. Porter. Let me quote: *"If the antidote is not administered within six minutes, full recovery is not guaranteed. After ten minutes, the patient enters full coma of indeterminate length. Once the solution saturates the nervous tissue it is beyond neutralization. Ultimately, Comatone deteriorates in a period of 18 to 20 years, but no experimental animals have had sufficient life-spans and vigor to survive that long after injection!"*

In spite of the gradual numbing of all sensation, Julie could still see and hear. The conversation, she had to remind herself, concerned her.

Porter's face was flushed. "Where is that nurse? Doctor, you are proposing a monstrous thing. It's trantamount to euthanasia."

"I disagree. As long as Julie lives," Tony insisted, "we may discover a way to remove the tumor. I'll take full responsibility for her nourishment and exercise..if she lives."

"And you'll go to the gas chamber if she dies! The malpractice act of 2015, prescribes capital punishment for euthanasia. You know that well as I do."

A SLIGHT commotion at the door made Julie strain her eyes. The nurse had arrived with the hypo. Porter snatched it from her. "About time! Step aside, doctor!"

Surprisingly, Tony did so. But when Porter advanced toward the bed, Tony grabbed his wrist and wrenched hard. The syringe smashed to the floor. Bending the captive arm back, he hustled the astounded doctor to the door and shoved him outside. Quickly he closed and secured it with a tilted chair.

Now he was bending over her, brushing the golden hair from her perspiring forehead with a touch so light she could scarcely feel it. "Can you hear me, Julie?" he asked.

She blinked her eyes in reply. Tears squeezed out and rolled down her cheeks.

"I love you, sweetheart. I'll take care of you; I'll always love you!" he swore brokenly and lay his head on her breast.

A week wasn't much time to make a man fall in love with you, but she had succeeded beyond her hopes. Of

all the gifts her beauty had won for her, Tony's gift was the most precious.

Death! Sweet oblivion.

She was beyond physical feeling now, but the bitterness of the situation struck through to the hard core of intelligence that was all that remained of Julie Raeburn, stage, screen and video star. Six months ago she was the toast of the nation, healthy, wealthy and beloved. At a mere 23, her lithe body had danced her to the top of the ladder.

YET ALL the power her wealth could command was too little to buy her release from the pain. Only love, the emotion she had spurned, had proven the final key to her escape.

He bent close. His face was lean, hollow-eyed, gaunt. But to Julie, it was a beautiful face.

In her self-centered suffering, she had neglected to make a will. And now the terms of the bargain denied him even the love she was willing to return.

A critic had once called her a poor actress; he was right. Julie couldn't bluff this time. She had needed Tony's love desperately, but all she could make was a down payment with her own.

If only there were some way—

SHE BEGAN to regain consciousness during the 28,110th exercise cycle early in the 20th year.

At first there was only the sound of her own breathing, which was rather heavy and somewhat irregular. Then she became aware of tension in her legs, a tightening in her calves and thighs.

She had been lying on some incredibly soft material, but now, unbidden by her mind, her stomach muscles tensed and her legs raised a few inches—lowered, relaxed. Now her arms moved, one set of muscles opposing another. Then her shoulders, her back arching slightly.

Strange. Limb by limb, muscle by muscle, she was exercising without the slightest volition.

She opened her eyes. After a minute she was able to focus them. In the faint, violet light she saw that she was in a rectangular cell, somewhat like an oversized coffin. There was a light taint of ozone in the warm, softly moving air.

Flexible tubes taped to each arm buried their tips in her flesh, and their other ends disappeared through the walls of the cell.

The pain!

Her mind recoiled from a prickle in her spine, but there was no longer the insulated refuge. The prickle persist-

ed; she tensed, awaiting the onslaught that did not come.

Then she felt a vibration, and her returning kinesthetic senses told her that her cell was moving, feet-first, horizontally. Diffused light broke through the translucent walls at her feet and swept up as the cell emerged. The lid came off. Faces looked down at her. Strange faces. Then the sides lowered gently, and they were detaching the tubes from her arms.

GENTLE hands fumbled at the base of her skull. A chill spray localized the area, then she felt tiny jerks as though fine wires were being withdrawn from positions deep beneath the surface.

Then she was in a hospital bed sucking broth through a tube and blinking at a very old man who stood beside her, fingers on her pulse.

At length he spoke. "I'm Dr. Porter, Julie; can you hear me?"

The name, Porter, dropped into the placid pool of her mind like a pebble, and the ripples left a wake of memories. She tried to speak and found that she had forgotten how. She nodded slightly.

Porter! Her last memory of him was his being pushed out a door by—by whom?

"You've been asleep a long, long time," Porter was saying.

Now questions began to rush to her tongue. She tried to rise up on her elbows and speak, but her throat still wouldn't respond.

Porter patted her hand. "Don't be hasty, girl. You have things to learn again. Just rest, and I'll be in to see you each day." He left with a shuffling gait. He must be ninety, she thought.

PORTER was right. Although her muscle tone seemed healthy, Julie's coordination, at first, was that of an infant. She could control her eyes, and she could suck from a tube, but her hands, when she tried to raise them, went any which way.

All afternoon she practiced speaking, but the sounds she made were unintelligible to her own ears. That night she lay awake long, trying to remember. She had been a dancer. There were memories of audiences and great bouquets and champagne parties. She had been wealthy. The memory of rare furs, precious stones, closets full of fabulous gowns. And her luxurious penthouse where she had entertained famous people.

But all this seemed, somehow, inconsequential. There was something else she must recall—an obligation having to do with a person. A man.

She fell asleep without remembering.

It was not until Dr. Porter's visit the next morning that

events leading up to her long sleep came back to her. The old doctor asked her a few questions that she could answer by shaking or nodding her head. Then she remembered the terrible pain that had been in her back—the inoperable tumor, and—"Tony!"

THE WORD blurted from her lips without effort. Porter looked both pleased and distressed. "You are remembering," he smiled. "I know the questions that must be on your mind. First of all, don't worry about your back; it is well now. The pain will never return.

"As for your Tony, well, we'll talk about Dr. Anthony Milton a little later. I don't want you to brood over this, Julie. All that matters is that you came through it in fine shape. You have no worries at all. The courts placed your estate in trust, and you have a considerable fortune now with the accrual of the interest."

As he spoke she was reliving the moments preceding the merciful oblivion that destroyed her pain so long ago. The young intern, Tony—her pleading for death—the deep hypo in her back—Dr. Porter dropping the antidote—and Tony leaning over her at the last. Now she knew why it had seemed important to remember. She had wanted so badly to repay Tony for risking imprisonment, perhaps capital punishment. He had loved her, and—

She tried to evaluate her own feelings, to recapture the tremendous emotion she had felt. It was impossible. She had told herself that she loved Tony, but she would have told herself anything to win freedom from the terrible pain.

Porter was right. She mustn't dwell on it.

THE DOCTOR was telling her how famous she was. "The people have never forgotten you, Julie. The story of your illness and your long sleep is one of the most cherished stories of the century. And now you are in the headlines again."

He didn't produce any evidence to prove it, but he spoke with such quiet sincerity that she didn't doubt him. "You will have your choice of hundreds of contracts for personal appearances. The networks have bid up the price for your first world-wide video interview to $200,000. You are a legend, the fairy-tale of Sleeping Beauty in reality."

Julie frowned; she failed to see the comparison. However, the thought that she had retained her position in the hearts of her public throughout the years was very pleasant.

The next day she could talk

a little. She asked for a mirror. Dr. Porter stalled a little at first. "You must realize, Julie, that you are now 43 years old. You are still a lovely woman, but—are you certain you want to look just yet?"

She nodded. She had reconciled herself to the toll that time must have taken.

Still it was a shock. Dr. Porter touched a button on the wall, and the ceiling became a mirror. Julie looked up into sunken eyes and hollow cheeks that made the fine bones of her face stand out in startling relief. Yet she was not too disappointed. Her hair, miraculously, was still a skein of spun gold silk, and they must have given her ultra-violet baths, for her skin was tanned smoothly. A few weeks of normal eating to fill out the hollows, Dr. Porter assured her, and she would be her lovely self.

A NOURISHING diet, injections and physical therapy did, indeed, bring a change. Not only was her body responding, but her mind was alert now. Shortly she was looking forward to meeting the press and planning her public appearances.

She asked Dr. Porter when this would be possible, one morning. She expected protests from him, but he said merely, "Whenever you feel equal to it, Julie."

"Why, I feel quite strong already," she said. "See here, I can brush my own hair, walk around the room, touch my toes ten times—"

Porter smiled at her demonstration. "Then perhaps it is time we talked about Dr. Anthony Milton."

Julie pulled the green robe about her tightly as if a chill had entered the room. She sat on the edge of the bed. "Must we? I—I thought—"

Porter waited, but she said no more. He stared down at his hands. "I didn't know what you would think about Tony, my dear; perhaps I had it wrong. Maybe I believed some of the romantic nonsense that was printed during the trials and after. At any rate, I didn't want my star patient to die of a broken heart before she recovered."

JULIE smiled calmly. "That was very thoughtful of you, doctor. I can imagine how my press agents must have played it up. Naturally, I *am* curious. Is the rash young intern still around? If he's in prison I must visit him, of course."

Instantly, Julie was aware she had said something wrong. The old man's face tightened and the sympathy went out of it. "Yes, he's still—around; but he's no longer in prison."

He moved into the hall and returned with a wheel chair.

"Sit down, please." It was more an order than an invitation. She did so, wonderingly. Silently the chair glided out into a vaulted hall. It was different from her memory of the hospital.

"Things have changed," she remarked. There was no odor of iodoform or ether, no white-capped nurses scurrying about with trays and syringes and the usual paraphenalia.

"This is not the hospital to which you were admitted," Porter spoke over her shoulder. "In fact this is not a hospital at all. This is the *Anthony Milton Memorial Comatarium*, an annex of the Mayo Medical Foundation in Rochester, Minnesota."

Julie raised her eyebrows. "Well! Our boy made a name for himself, after all. Incidentally, what's a comatarium? And how soon can I break out of here?" She shivered. "It reminds me of a mausoleum."

"Miss Raeburn," Porter said coldly, "you are about to see the function of a comatarium. And I must ask you to reserve your remarks for the moment. The Sisters of Mercy wouldn't understand. Until this minute you have been a much revered person, a tradition, you might say. For you were the inspiration for all the achievements of Dr. Milton."

THEY TURNED through a great arch and moved into a chamber almost a city block long and some fifty feet wide. On either side of the single aisle was a continuous bank of translucent squares, some four feet to the side, flush to the black marble wall. From each a dim, violet light emitted.

Females of a religious order in white, hooded capes moved along the panels studying the dials in the wall above each, making adjustments and peering through vision slots.

Julie comprehended at once. These were the ends of the crypt-like cells such as had cradled, fed and exercised her body for twenty years. Now hundreds of persons lay as she, free from the torture of pain.

"But—you said—"

"Prison. Yes, Tony Milton went to prison after a trial that blew the hypocritical stuffings out of the medical world, the theologians and every narrow-thinking minority that had successfully agitated against euthanasia.

"Tony was given an indeterminate sentence pending your possible death, but in conducting his own trial he kindled a revolt against one of civilization's most brutal sacred cows. He maintained, all the way up to the Supreme Court, that the mission of medicine was to relieve pain for the dying as well as those who might recover.

"AT ONE TIME, he pointed out, the occasional hopeless case might expect a merciful end at the hand of a compassionate physician willing to risk disgrace. But the capital punishment law not only stopped this practice, but it killed all research toward the end of solving the horrible enigma.

"Tony cited your case in point. He told of the suffering that would have killed you eventually, and he defended his action by appealing to all who knew you and loved you. It was most effective."

As he spoke they progressed slowly down the aisle. Porter continued, "Tony went to jail, but a movement sprang up to release him. I—I am ashamed to admit that I was not among the first to join the movement. Anyway, we succeeded. Tony asked that he be allowed to attend you. I gave my permission gladly, for you were a considerable problem.

"For several years Tony spent all his waking hours taking care of you, flexing your muscles like a polio patient, studying your metabolism, force-feeding—doing all known to keep you alive. Slowly he developed means for doing this automatically. Meanwhile his agitation to revoke certain laws freed him to research the various derivatives of Comatone. He developed a new drug of similar effect, but which could be neutralized at any time, and the patient brought back to full consciousness.

"Citing his success in keeping you alive, Tony launched a campaign to offer the new coma to any so-called hopeless patient who sought escape from unbearable pain. He succeeded, largely thanks to the legend that surrounded you, Miss Raeburn."

JULIE asked in a quiet voice, "My tumor—was he responponsible for its removal?"

"Yes, at a terrible cost to himself. He was doing the work of two men, and five years ago he contracted *angina pectoris.*

Doctor Anthony Milton has become a symbol.

"Still he persisted in yet another project with which he had struggled for fifteen years—the reduction of your spinal malignancy."

"Is there no cure for this, this angina thing?" she asked.

"The cure is rest, principally. We have surgical techniques, but without months of complete inactivity they are impossible to attempt. Tony refused to stop work. He knew that when you came out of your coma the pain would kill you, and we were reluctant to administer the newer drugs in your weakened condition.

"He succeeded. He devised a new operation and tried to perform it on you; he collapsed, and I had to complete it."

"Then—he did die?"

"No. He regained consciousness, but the pain would have finished him quickly if we had not administered the coma-drug."

"Dr. Porter, he's here, in one of these cells!" She knew it must be true, and she had a vague foreboding.

Porter's silence was her answer.

"Can't you operate now?"

"It is much too late. The cardiac damage is done. He might live another year, five years, in the cell, but his

heart will not support him in an active metabolism."

HER EYES turned to sweep the long row of cells. "Is this true for all these people? Is this the way you dodged the objections to euthanasia?"

"Not at all. Some may die, but for most there is hope, active research on new treatments, new techniques that may free them from their disorders. Meanwhile, they aren't suffering needlessly."

They had reached the end of the rows. Porter stopped the wheelchair before the last cell on the right tier. Next to it a vacant space gaped at her like an empty eye-socket. The cell was missing, the only one in both banks.

"Why are we stopping here?"

"This is where you were," Porter said.

A white-robed sister stood quietly beside the very last cell, face averted, waiting.

"And Tony? He—he is in there?"

"Yes, Julie. For almost five years he lay beside you." The old man came around and stood before her. "His last wish was that we waken him when you were able to see him. He assumed, of course, that you would be willing to face him. Are you?"

HER HANDS gripped the arms of the wheelchair until the knuckles whitened. "Yes, yes—no, wait—I—I don't know. Will it hurt him?"

"Angina has been called the most painful disease of man. The emotion of seeing you again is almost certain to bring on another attack of pain. Probably it will kill him."

"He knew this?"

"Yes."

She was silent for a full minute. "You said," she began slowly, "that for these others there was some hope. Why not for Tony?"

Porter sighed. "Our efforts to rebuild hearts have given no promise whatsoever."

"But—you are still trying?"

"Yes. Yes, of course. Research never stops, but the prospects of success are almost nil. The heart is a—"

"What are the little dials and meters above each cell?"

Now Porter paused before answering. "They tell us the patient's condition."

"Would they warn if a patient were very near death."

"Well, yes, I suppose so."

"Is Tony very near death now?"

"Not unless we waken him."

"Then—I'll wait."

Porter studied her face. "I don't understand."

"I'll wait until you have found a way to mend Tony's heart. Or—or until the little dials—say it is too late."

The hardness that had come into Porter's face was melting away. "Dear child, that is impossible. The dials will give less than an hour's warning. With you away on your tours and personal appearances—"

"I'll wait. Here."

"But Julie, only Sisters of Mercy are allowed to attend the cells. Is it not so, Sister Joanne?"

THE WHITE HOOD nodded in profile, then slowly, for the first time, turned to face Julie. The pale face was filled with gentle emotion. "But the order is open to all who would serve," she said softly.

Porter instinctively averted his face from the clear, blue eyes. "Julie, you must be very certain this is what you want. I know Tony wouldn't have expected or wanted it this way."

Even as he spoke he knew the words were useless, for Julie had slipped from the chair and was pressing her cheek against the end of Tony's cell, tears brimming her eyes and her lower lip caught between her teeth.

Truly, what other way was there?

The Quest

[*continued from page 57*]

stopped and stared and the light went out of his eyes. It was replaced by that look that said I was less than nothing. "Albie," he said mildly, "if I were you, I'd forget you heard me say anything." His eyes bored into mine, and for an instant I looked into the face of death.

Then he laughed and dug his heels into his horse's flanks, let loose with a wild yell and scudded across the plain. Then it happened. A flash of lightning directly a head of the speeding horse. It reared in terror and threw him and the angry clap of thunder drowned out his startled shout. The frightened horse kept on going; another flash struck before it. It reared again, and wheeled, and thundered back, blinded. Jimmy, dazed, was staggering to his feet. I yelled to him, but it was too late; there was an ear-splitting peal of thunder, and the terrified horse bore down upon him. He turned, just in time to see those flying hoofs. He threw up his hands as they trampled in panic over him. The rain came down, and by the time I got to Jimmy Oakes, he was dead.

It was ironic, all the newspapermen pointed out, that the first man to conquer the first frontier of space, to open up a new dimension of travel, should meet his death from one of the most primitive forms of travel. A most tragic accident, they agreed.

The gardener, who helped me carry him to the wagon we brought out, looked down on him and shook his head. "Too proud," he said simply.

I thought of the old Greek *hubris*, the pride that was supposed to bring the wrath of the gods down upon man, and was grateful that Jimmy hadn't told anyone else. Any psychiatrist could explain it—the fear had been too great, and Jimmy Oakes had escaped from it in the only way he could. Fortunately for spaceflight, it wasn't too apparent that the first pilot had returned insane.

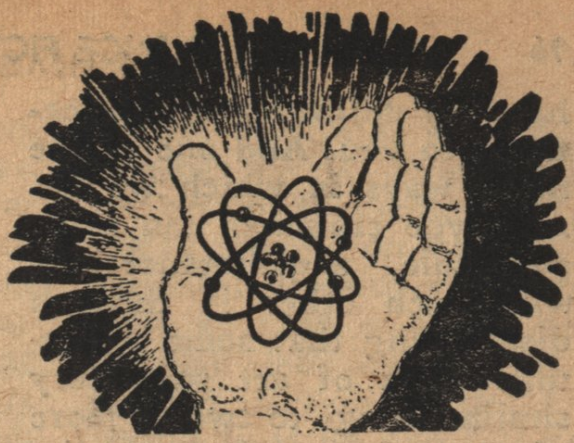
Yet, when I remember those awful bolts of lightning, I understand how primitive peoples could believe that they were hurled by angry gods. But, for me, the crowning irony was finding the copy of Kipling that Jimmy Oakes had been reading, where he left it face-down. I picked it up, and my eyes fell on.

Lord God of hosts, be with us yet,

Lest we forget—lest we forget!

★

Editorial



Communication Problem

(This editorial was presented in slightly different form as an address to the 15th Annual Philadelphia Science Fiction Conference, on the afternoon of November 9, 1956.)

THE QUESTION of whether art is communication is one which comes up every now and then, and I'm not sure whether it has been settled. If by the phrase you mean "art *equals* communication", then the arguments are going to be somewhat different than they will be if you mean, "art can be considered as *ways of* communication". But when you find general agreement that a given object is a work of art, then it follows that some sort of communication has taken place.

I haven't inadvertently evaded the question, "What *kind* of communication?", or "*What* has been communicated?" I've avoided the question deliberately. No clear-cut answer can be given as to *precisely* what is comunicated by "art"; and when we come down to individual works of art—which is really the important matter, rather than any Platonic essence—the arguments begin in earnest. They're endless, of course, and that is all to the good. Not that anyone ought to spend a lifetime disputing the merit, or lack of merit, in "Hamlet", or Beethoven's 9th symphony; but listening in, reading, or joining in long enough to clarify your own feelings—to have some idea why you agree or disagree with generally accepted opinion, or don't accept any opinion you have come across, or don't care—all this can help you to arrive at your own individual standards of judgment. Something labelled "art work" may or may not "say" anything to you; but something which you *feel* to be a work of art—feel it yourself, not accept a label stuck on it by someone else—

has very definitely said something to you. And one of the many ways in which we human-type creatures can make enjoyable acquaintanceships with each other is through discovering that some particular work of art says very similar things to two or more of us, and that these particular similar things seem to have some sort of importance to us. We can exist without them, no doubt, but we can live much more fully with them.

WHEN IT comes to criticism in any of the art-forms, the critic starts with the assumption that anything in his field that is labelled "work of art" ought to communicate— "say" something. If a particular example says nothing to him, he's likely to report that the object was mislabelled. Or, if he knows that other people have testified that the object did say something to *them*, the critic —we'll assume that he's both capable and honest—will report that while the object in question seems to have said something to some people, it hasn't said anything to him and he therefore has a right not to be convinced that the label has been applied correctly. Whereupon he'll go back to discussing artworks which *did* say something to him, and delve into the what's how's, why's and wherefore's.

In short, and to oversimplify, the critic wants to know what the artist was trying to say in the particular object under examination. How well did he succeed? Does what he said seem to have been worth saying? Has somone else said it better before? and so on. To the extent that any of us grapple with these questions, we're all critics—as opposed to the person who says he doesn't know anything about art, but knows what he likes. (That person reminds me of the person who knows the difference between right and wrong. I'd envy him if I could believe him.)

NOW IN all this, when I've used the phrase "work of art", I hope it's been clear that I was not talking about the quality of any object with that label on it. Any object with the label may range in quality from the sublime to the sub-rosa, but value judgements are pragmatic affairs—that is, in the last analysis, a given work of art *is* great, good, and so on down the line, insofar as people who are exposed to it find it says something to them, above and beyond the point of simply transferring information. If, for example, all that Tolstoy's "War And Peace" says to you is that Napoleon's Russian Campaign was something less than a complete success, then you wasted quite a bit of eyesight reading the novel; you could have obtained that informa-

tion much more simply from histories and encyclopedias. If, on the other hand, "War And Peace" gave you a feeling that you understand these historical events, and the human intangibles surrounding the events, considerably more than you ever did from reading the histories, then Tolstoy has said something to you. (Needless to add, I hope, that this is a gross oversimplification.)

When we talk about "great" works of art, we are not concerned with popularity polls. It isn't so much the *number* a persons to which a given work of art has said something, as much as it is the breadth and depth of affect upon those to whom it communicated, and the diversity of such persons—both in time and temperament.

With the artist, then, we have the intent and attempt to communicate; and with the artwork which has correctly been labelled, we have some sort of c o m m u n i c a t i o n achieved.

ALL THIS may seem rather remote from science fiction, but it isn't at all remote. Fiction is an art form; works of fiction are works of art. In producing any kind of fiction, the writer (he's an artist, but let's use the more mundane term now) has communication problems; there are special communication problems in writing good science fiction, insofar as science fiction has special elements. For the rest of this essay, I'm going to proceed on a particular assumption which may not always be true in actual practice. But let's assume that all science fiction writers are trying to write and sell good science fiction—that is, stories which at least a substantail majority of the readers will agree *are* science fiction, and which "say" something which could not have been said as well, or better, in nonfiction, or in some other form of fiction.

One difficulty with any branch of fiction which has special elements, is a tendency to treat it as a specialty. That is, the special elements are emphasized so much that you begin to get a cult function. Now one of the most telling symptom of cultism, as Anatol Rapoport has noted, is failure to communicate. He says,* "That is not to say that cultists don't talk to other people. On the contrary, they talk to much. But talking does not necessariy mean communicating." That is, the cultist is likely to have a very specialized vocabulary and idiom; thus, much of his talk is likely to be composed of terms that are outside the noncultist's experience, or of terms that he uses with mean-

---

* "How To Say What You Mean," by Anatol Rapaport, ETC., Summer 1956.

ings that are outside the non-cultist's experience. To quote again from Mr. Rapaport:

"You do not communicate, that is, it does no good to 'say what you mean', unless (1) there is an area of common experience shared by you and the target of your communication, and (2) your words refer to things or events within that area.

"If these conditions are fulfilled, there is no limit to how technical you can be. Indeed, technical language, if properly used enhances rather than hinders effective communication by playing on the sense of solidarity of the communicants. Teen-age jive, various forms of slang, occupational jargons — all are species of technical language and are eminently successful as vehicles of communications. However, I repeat, the two conditions just named must be fulfilled. If there is no area of common experience, technical language becomes gibberish. If a link between words and experience is not felt, the situation is even worse."

THE FIRST question for the science writer is, what is the target of communication? There are three reasons why that has to the first question; (1) the writer isn't a "pure" artist writing for himself alone with the pious conviction that the worth of what he has written eventually will be apparent to someone, who will then publish it for an eagerly waiting world; he wants to sell that story; (2) there is an intermediary between his potential readers and himself, known as the editor; (3) he wants to sell again and again and again.

As if you hadn't all guessed it by now, I'll assert as patiently and firmly as possible within the range of dogmatism that the writer's initial target of communication is the editor, and that the writer needs to be aware of the editor's target of communication.

At this point, I'll have to ask you to go along with another assumption which may not always be true in practice. Let's assume that the editor, like the writer, wants to promulgate good science fiction.

NOW SINCE we've already defined "good science fiction" (for the sake of this essay) as "stories which at least a substantial majority of the readers will agree *are* science fiction, and which 'say' something which could not have been said as well, or better, in non-fiction, or in some-other form of fiction." By definition, then, we have eliminated some possible targets of communication. We're not aiming directly at people who have already decided they don't want to waste their eyesight on anything that is clearly science fiction; and we are not aiming at people who are allergic to stories which say anything whatsoever. (Obviously, we hope that some such people will be within range when we fire, and that we'll make bullseyes on them; but they aren't the tar-

gets—we're not adjusting our sights for them.)

And since the aim is expanded communication, because both of us—writer and editor—want to see circulations increase under our defined aims, our target is not the "cult-type" reader, who wants his material specialized to the point where only fellow specialists can make any sense out of it whatever.

Our target of comunication then is the person who enjoys good fiction of the non-science fiction variety, as well as the reader who is already with us. The communication problem is to produce material which will impress our non-science-fiction-t a r g e t with the fact that this is good fiction, first. Just as the horseless carriage manufacturer wants not only his regular clientele, but the public in general to feel that the latest model Fallen Arch 6 is a good car—and secondly to find it a good Fallen Arch 6—we want our target to realize that this is "well, what do you know: science fiction" after he's been impressed by the story. Ideally speaking, the revelation that this is science fiction isn't necessary; but in actual cases, we want him to remember the brand so that he'll look for the magazine again next month.

ONE OF the many ways in which general fiction can be broken down is into story and background; but with a specialized form of fiction such as ours, there is a triple division when you analyse it in this fashion: science, story and background. (In the puzzle type of murder mystery, the division would be mystery, story, and background.) With story itself, there's no more communication problem than with any other kind of good fiction; it's the other two elements that make for difficulty.

First of all, there's the science. Let's rule out of present consideration the numerous science fiction stories where there is no difficulty because there aren't any scientific technicalities. Secondly, we'll rule out stories—however enjoyable otherwise—where the "science" is mere doubletalk and magic gestures. It is in the "prophetic" type of science fiction—the story based on logical extrapolations from a sound scientific base—that communication does become a problem and the danger of cult-talking is always present.

What about the area of common experience shared by us and our targets of communication?

The area is a great deal wider than you might assume. Our target, as we have described the persons comprising it, is first of all, very much aware of science in its present-day proliferation, of

the part it plays in our existence, and of the tensions the situation has set up. These tensions have existed for a long time, but never before has civilization been so thoroughly permeated with them at so many levels. What are the tensions? There is the drive, on the one hand, to expand and integrate scientific knowledge and processes into a world milieu where science will be man's servant in his pilgrimage toward understanding himself and his plenum, and realizing his constructive potentialities. Opposed to this, is the drive to apply every bit of knowledge and process possible, as soon as possible, for the immediate advantage of any particular minority as a weapon in a struggle for power and imagined security. And the third force is the drive to suppress, and if possible destroy, knowledge and processes in the desperate hope that this will simplify existence—and at the worst insure that we won't all be one with Nineveh and Tyre.

THERE IS no strict rule as to what we can or can not, should or should not, try to "say" in fiction, but one of the things every good science fiction story says is that the human situation isn't hopeless. We are not *inevitably* doomed to hell on earth, or elsewhere, if we can listen and understand and keep striving against what have been called our evil aspirations. I refer to the human inclination to seek short cuts—the easy way to spurious, easy definitions of success, bigness, and alleged good times. On the individual or small-group level, we call such short cuts crimes, or legal cannibalism; on the large scale we call them war in its numberous forms—not all of them violent.

We have, I say, sufficient area of common experience with our target, but the communication problem comes up in the second requirement: that the words we use refer to things or events in that area. This does not mean that everything in a story has to be easy to understand at first glance; it does not mean seeking the emotional and informative level of TV. commercials. It does mean avoidance of cult-talk. If, for example, you are extrapolating on some phase of electronics, and you use not only technical high-fidelity terms and phrases—but also high-fidelity terms and phrases in the special manner that the high-fi addicts use them when they're talking to each other; and if, in addition, you dream up extrapolations on the lingo, too—well, you might as well translate it all into Latin rhyme and let them chant it, because it's going to be gib-

berish to everyone except the hi-fi bugs, anyway.

It's true: the hi-fi adepts do talk that way; and if you know your subject you'll get a wonderful fidelitous verisimiltude in the story by reproducing such patois. The comunication will be virtually nil, however. Hamlet to the contrary, art does not hold the mirror up to nature. A mirror reflects what is before it; a camera gives a more exact reproduction than the eye —but neither comments or interprets. Art communicates interpretation and comment upon the human situation, upon all of creation; it doesn't merely present a photostatic copy of it.

JUST HOW you can project the necessary scientific extrapolation, in conversation or description, with an air of verisimiltude about it, is something that each writer has to work out for himself. It can be done; Heinlein, to name just one example, has done it rather well.

Backgrounds aren't anywhere near as much of a problem. I'm not referring to the scientific working out of backgrounds—as in "Mission of Gravity"—but rather the communication aspect of portraying them. They're fundamentally simpler to project simply because they are most likely to be imaginative—and you can describe imaginary things only in terms of your own experience, first-hand or vicarious. They have to be translated into areas of common experience before you can see them and feel them yourself. Science can tell you a great deal about what the surface of the moon looks like, and what it's composed of, what you'll find and not find there—but there's no authentic account of what being there actually *feels* like. Thus, so long as you avoid errors which can easily be spotted, and take care not to express your imagined feeling in terms of a specialized jargon that is meaningful only to other practitioners in the specialty, your expression of what it feels like on the moon can communicate itself well enough to someone else who hasn't been there, either.

LET ME repeat: technical jargon isn't a bad or even an undesirable thing in itself. It's a useful and necessary communication tool in its own area, but that area is a narrowly restricted one. Among the hi-fi specialists, no doubt it is possible to exchange recipes, make love, and even conduct lay psychotherapy in high-fidelitese. And I suppose one could cut grass with one of these super-duper electric shavers, too. If one could, however, I suspect the ratio of communication in hi-

fi jargon for the purposes of fiction, and of lawnmowing efficiency with electric shavers would be about the same.

But the most subtle and even insidious cult-language that science fiction writers have to beware of is the idiom of science fiction itself. In the past thirty years, many terms which were science fictionists' private stock have gotten into the common punch bowl, and that is very good. The trouble is that most of us tend to forget that there is a large supply of words and phrases which are still science fiction property, despite that fact that more people can be found on the grounds than ever before. Again—it isn't the use of specialized terms in themselves; it's the use of specialized terms in restricted ways, set forth *as if* they had general meaning, that blocks wider communication.

There has been quite a bit of discussion and complaint about science fiction being in a sort of ghetto. A ghetto does have certain particular advantages, but the ghettoes of cult-talk are built by the adepts themselves. The science fiction ghetto was constructed by innumerable people who wrote and edited and published and read science fiction. The walls around this ghetto were pretty high before many present-day writers discovered there was such a thing as science fiction, so there's no point whatsoever in wiggling fingerbones of accusation at anyone. Even if there were, accusations wouldn't change the situation.

But present day science fictionists *can* change the situation, even though it will be most likely a slow, hard job at best. In fact, only science fictionists themselves—science fiction writers and editors, mainly, who can remove the cumunication and get science fiction into the so-called mainstream of literature.

(Here ends the substance of the version presented at the Phildelphia conference.)

QUESTION: *What do you mean by science fiction getting into the mainstream of literature?*

Answer: I mean mainly, science fiction's getting out of any special category of fiction, being thought of as a specialty, considered as something apart from general fiction. "Moby Dick", for example, is a sea story, but is isn't filed under "sea stories"; "War And Peace" isn't confined under the heading of Napoleonic tales, or war stories: "Don Quixote" isn't fenced off, with a label label "knightly adventures" on the corral in which you find it. You'll find some such kinds of sub-headings for the purposes of reference, true—but these novels are thought of as fiction first, and their

background themes are considered as secondary. Moreover, the giants of literature —of which these three are examples—can be categorized in numerous ways. "Moby Dick" might also be filed under "symbolical novels" or "philosophical novels"; "War And Peace" might be subtitled "historical philosophy, or "historical novels"; "Don Quixote" would certainly go into a "satire" section, or "comedy of manners" shelf.

Question: *Wouldn't "Brave New World" be another example?*

Answer: Definitely, it would. "Brave New World" got into the "science fiction" ghetto after the fact; there's no reason to assume that either the author or publisher originally thought of it as science fiction.

Question: *Can you .give some examples of specialized terms now used in science fiction in the way you were talking about?*

(I was stumped for an example and admitted that, being in the middle of the forest, I couldn't think of specific examples offhand, even though I knew—and we all realized—that examples exist. Someone suggested "overdrive.")

Answer: "overdrive" is an excellent example. It's a perfectly good technical term—relating to horseless carriages—which has a totally different meaning in a number of science fiction stories. The term is likely to be picked up and used by almost any science fiction author because the specialized meaning is familiar to so many science fictionsts. Yet to a reader who isn't an adept, the special use of this term blocks communication.

It isn't just one word—or a few expressions here and there; it's a matter of an expanding repertone of terms and phrases, used in the cult manner. Writers do project a feeling of solidarity with the science fiction readers through this practice, and communication within the inner circle is very definitely enhanced. But the kind of universal communication which is the province of good fiction is crippled by such devices. You can't blame the general reader of good fiction for assuming—however mistakenly—when he finds a story interlaced with such things, that this may be very fine stuff for the science fiction bugs, but it has nothing to say to him.

No matter how "open minded" we imagine we are, or try to be, there are certain areas with nearly all of us where, for the most part, we prefer not to take the trouble of listening. I have my blind spots, too; I'm allergic to electronics jargon, for example. Right now I feel thirsty, and the

prospect of a cold beer is much more inviting than staying here listening to George O. Smith lecture on technical problems of interplanetary communication (the science thereof). It's unfair, and not exactly nice to George (of whom I'm really very fond, and many of whose stories I've enjoyed immensely)—particularly if he's suffered through my long-winded, long-haired discourse on literary matters. But his subject is way over my head, and since the object of George's address is to transmit information—rather than to interpret and comment upon matters of more importance to me—and since, in the very nature of things, I could hardly expect him to scale his remarks down to my level of comprehension, when it comes to matters electronic—I think I'll have that beer instead, and hope for his forgiveness afterward.

R.W.L.

★

NEXT TIME AROUND

The big news this time is that your letters and postcards, in response to the questions we asked you in our last issue, have been definite and encouraging.

***Science Fiction Stories* is going to become a monthly publication!**

We are going to start a policy of presenting outstanding science fiction novels in serial form.

Watch this space, as the billboards say, for the announcement of our first serial; you'll see it in our May issue.

Meanwhile, this May issue is going to have other features worth obtaining. Emsh has turned in a very fine cover for Robert Silverberg's tale of a sunrise no-one wanted to see — "Sunrise On Mercury"!

A Bertram Chandler who doesn't show up often enough for many of us, is back — and we have him in a short novelet entitled, "Zoological Specimen". It sounds innocuous, doesn't it? The specimen isn't!

Special Article

by the author of "The Stone Of The Wise."

THE DOWNFALL OF ALCHEMY

by L. Sprague de Camp

THE SPLIT between chemistry and alchemy was foreshadowed by Paracelsus, one of the greatest combinations of genius and quack in history. He was born about 1490, most likely in Switzerland, and probably christened Philippus Aureolus. The name grew to Philippus Aureolus Theophrastus Bombastus von Hohenheim, "Paracelsus" being a nickname to show that he was greater than the Roman physician Celsus.

After attending the University of Basel, and studying mineralogy in the Fug-

ger mines in the Tyrol, he set out on travels that took him all over Europe and, perhaps, to the Near East. At one time he studied magic under the Abbot Trithemius, a notable white magician of the time.

In 1526 Paracelsus was an army surgeon in Germany. In that year, Erasmus persuaded the city council of Basel to appoint Paracelsus to the office of city physician, which included the chair of medicine at the University. Paracelsus came, and soon had the professional class of Basel in an uproar by lecturing in German instead of Latin; publicly burning the works of Galen and Avicenna; denouncing all his predecessors and colleagues as quacks and "lousy sophists," and proclaiming himself the messiah of the new medicine.

When the novelty of Paracelsus' teachings wore off, his quarrelsomeness, drunkenness, and egotism became intolerable. As a result of a dispute over his medical fees, he was forced out to resume his wanderings. Invited to Salzburg by the archbishop, he died there in 1541, either as a result of a drunken brawl or, more probably, of a prosaic illness.

ALTHOUGH Paracelsus shrewdly criticized the doctrines of Galen, Celsus, and other medical authorities, his own theories were, for the most part, equally fantastic. He adhered to the sulfur-mercury-salt theory of matter and to the macrocosm-microcosm concept of the universe. He left alchemical works about as unintelligible as most of their kind, telling how to produce the Tincture of the Philosophers by making Red Lion into White Eagle, and informing the reader that if he didn't understand that, he would never master the spagyric (alchemical) art. He also claimed to be able to make a homunculus, or tiny living artificial man.

His main contributions to science lay in chemistry. He introduced opium and compounds of mercury and antimony to medicine. He observed anesthesia from ether and proclaimed that the "true" objective of alchemy was to make, not gold, but drugs. He founded a school of "iatrochemistry" or pharmoceutical chemistry from which chemistry proper may be said to have grown.

Alchemy reached its peak with Paracelsus. For a century and a half after his death it continued much as before, veiling the onset of its decline with the greatest output of alchemical literature yet seen.

THERE WERE always disbelievers in alchemy,

and some medieval scholars caught an inkling of the truth about elements and atomic weights.

The man who really dynamited alchemy, however, was a tall, gaunt, frail aristocrat, the mild, cautious, and scholarly Robert Boyle. He put forth the first modern atomic theory in the second edition of his "Sceptical Chymist" (1680), defining elements as *"certain primitive and simple, or perhaps unmingled bodies; which not being made up of other bodies, or of one another, are the ingredients of which all those called perfectly mixed bodies are immediately compounded..."*

Boyle had fiddled with alchemy himself, with the uusal lack of success. Now he and his assistants, Hooke and Mayow, founded a school of "pneumatic chemistry" whose workers revealed the complex nature of the Empedoklean "element" air. At Oxford, he taught Isaac Newton and the astrologer and antiquarian, Elias Ashmole. Ashmole and Newton, after collaborating in alchemical experiments, reluctantly abandoned the chimera of transmutation. Although Newton spent years in chemical research, and did make some discoveries in this field, his accomplishments were small compared to those in mathematics and physics.

Boyle was ahead of his time, and not for more than a century did his theory of elements take full effect. Many chemists, in the meantime, tried to salvage something of the alchemical theories: thus Stahl's phlogiston theory, and Black's caloric theory, prolonged the life of the concept of fire as an element.

But at last, with Lavoisier's work on combustion, the basic assumptions of the alchemists were discredited. The discovery of radioactivity, at the turn of the nineteenth and twentieth centuries, showed that transmutation occurs in nature; and Rutherford's breakdown

of nitrogen atoms in 1919 shows that it can be accomplished artificially, so that now it is a commonplace of neuclear physics. But while science knows that you can transmute elements with cyclotrons and uranium-piles, it knows just as clearly that transmutation is not possible by the magical methods of the alchemists. We must therefore reject the romantic idea that any alchemist ever made gold with his Stone or Powder of Projection.

ALCHEMY declined in public favor in the eighteenth century, for several reasons. While the skepticism of scientitsts may have had some effect, the spread of republican government that began with the American Revolution had still more. Princes had been the chief patrons of alchemists; but parliaments showed more resistance to the salesmanship of transmuters—as when in 1854 an alchemist sought a contract to make gold for the French mint. Perhaps it is symbolic that a German alchemist (appropriately named Tausend) in 1929 got large sums from the monarchistic General Erich Ludendorff by promising to make enough gold to restore the Kaiser.

Moreover, the alchemist's apparatus was terribly expensive, and he could not process his clients on a mass basis as could the astrologer. And while the astrologer's client must wait a long time to learn the accuracy of the prophecies he has paid for, the client of the alchemist is in a position to demand immediate results. So when James Price, in 1781, announced that he could transmute metals, the Royal Society, of which he was a member, took him up on his boast and pressed him for a demonstration until the unhappy man killed himself rather than face exposure.

Occasional attempts occur to revive alchemy. In the late nineteenth century, the Alchemical Association of France set up an *Universite*

Libre des Hautes Etudes, which announced courses leading to the degree of Bachelor of Kabbalism. Even today, alchemical treatises in public libraries are thumbed by would-be adepts calling themselves Rosicrucians, Kabbalists, and Hermetic philosophers, whose minds are fascinated by the hidden meaning of numbers and other symbols, and who write verbose accounts of mystic revelations and unintelligible discoveries.

BESIDES THE alchemists proper, a lot of near-alchemists and pseudo-alchemists flourished: mystics, fakers and joiners.

Now, while alchemists proper combined magic with their chemistry, they were sincerely interested in experiments on the physical plane. The alchemistic *mystics*, on the other hand—though they used alchemical terminology—were concerned more with cosmic speculation and mystical religiosity than with making gold. Some of these did no chemical work at all, and are classed as alchemists by courtesy only.

The most noted of these pseudo-alchemical mystics was the German cobbler Jacob Boehme (1575-1624). A small, meek, unimpressive man, he lived an uneventful life in Goerlitz until the year of his death, when persecution by the local Lutheran pastor drove him to Dresden. Boehme claimed that when he was an apprentice, a mysterious stranger appeared to him and said: "Jacob, thou are little, but wilt become great, and quite another man, so that the world will be astonished at thee."

During the following years, Boehme had periods of "illumination" and expressed the things he had learned during these trances in a series of mystical treatises on the nature of the world. God was the Abyss and the One Grand Thought; Christ was the Philosopher's Stone; there were Three Principles and Seven Qualities. Angels, planets, metals, gems, the falls of Lucifer and Adam, Atonement and Redemption were all fitted into Boehme's grand scheme.

SOME LATER writers asserted that Boehme and his ilk were the only "true" alchemists, and that other so-called alchemists were mere "sordid hunters after gold" unworthy of the Hermetic name. An American, Ethan Allen Hitchcock, first put forward this theory in 1857. Hitchcock concluded that the *prima materia* of the more mystical alchemical works was really Man; that the process they described was mental, not material; that "Mercury" was conscience, and

that the Great Work was the achievement of moral perfection.

Hitchcock's book—though many of its ideas were adopted by Carl Jung, the Swiss psychologist—contains many absurd arguments. Thus Hitchcock said that the alchemists must have been speaking allegorically about unicorn's horn and gold-making, for everybody knows that unicorns do not exist, and "It is impossible that any man can be deluded" about gold-making. Really, of course, plenty of people believed in unicorns, or in gold-making, or both.

Furthermore, the term "alchemist" has been used, for over a thousand years, primarily to mean a seeker after the Philosopher's Stone, and after the gold and the Elixir which he hoped to obtain therefrom. It is contrary to sound method arbitrarily to rob the gold-hunters of the name and bestow it on wool-gathering mystics who never sniffed the fumes of an athanor. Much of the regular alchemists' talk about a mysterious Gold of the Philosophers was probably a smoke-screen to hide behind when they failed to make real spendable gold.

AT THE other extreme were the swindlers, who talked of making gold, and sometimes performed bogus demonstrations, but did not really try to solve the problems of the Stone. It is hard to distinguish this class from the legitimate alchemists, for the latter sometimes resorted to legerdemain to raise money for experiments. Chaucer describes one of their many tricks:

> This false chanoun—the foule feend hym fecche!
> Out of his bosom took a bechen cole,
> In which ful subtilly was maad an hole,
> And thereinne put was of silver lemaille
> An ounce, and stopped was withouten faille
> This hole with wex, to kepe the lamaille in . . .

When the "cole" was dropped into the crucible in which some mercury was being heated, the "wex" melted and the silver fused, ran out, and formed an ingot. Other schemes included the use of a double-bottomed crucible, with a lower bottom of metal and a false upper bottom of dark wax, the interspace being filled with powdered gold or silver; a hollow stirring-rod filled with powdered noble metal and sealed with wax; and nails or coins half of iron or copper and half of gold, the golden half being painted to look like the rest.

One such faker, the Cy-

priot adventurer Mamugna, fled in the 1550's from his native Cyprus to Venice, ahead of the Turks. There, taking the name of Marco Bragandino after his former patron in Cyprus, he learned some useful tricks from the alchemist and conjuror Scotto. He got into trouble, disappeared for a while, and in 1589 reappeared with money which he spent lavishly, hinting that he could make gold.

When the needy Republic of Venice invited him to make some for them, he came; but instead of gold, he gave the Venetians endless promises and small-scale demonstrations of "multiplication." Called to account at last, he fled to Bavaria where he promoted Duke Wilhelm V with almost equal success. But this time he failed to flee quickly enough, and the axe of the Duke's headsman ended his career.

Besides such patent swindlers, some people did not openly claim to practice alchemy but were nevertheless credited with knowledge of the art. One such—the French king Charles VII's treasurer Jacques Coeur—circulated alchemical rumors about himself to cover up his embezzlements until he was caught, fined, and banished.

ANOTHER GROUP of pseudo-alchemists, who may be called joiners, used alchemical terminology and symbolism to promote their fraternal associations. Of these the most celebrated were the Rosicrucians.

Rosicrucianism first appeared in 1614 in Cassel, Germany, in the form of an anonymous pamphlet called *Fama Fraternitatis, or, a Discovery of the Fraternity of the most Laudable Order of the Rosy Cross.* This manifesto, which defied the pope and denounced alchemy, described the career of a mysterious personage called "C. R. C."

This prodigy, said the pamphlet, was a Dutchman born in 1378, who, as a boy, had gone to the Orient where he studied the wisdom of the ancients in Damascus and other Muslim centers. He visited the secret city of Damcar in Arabia where he translated the Arabic "Book M," another unwritten classic like the *Book of Thoth,* the

Book of Dzyan, the *Necronomicon*, and the *Memoirs of the Hon. Galahad Threepwood*.

To hand on his ideas when he returned to Europe, C. R. C. founded a fraternity of eight members, sworn to celibacy and a century of secrecy. The author of the manifesto explained that the century was now up, so the fraternity was asking for new members to embark upon a great open conspiracy to reform Europe. Interested parties were urged to publish letters indicating their willingness.

Next year appeared a companion piece: *Confession of the R. C. Fraternity, to the Erudite of Europe*, a windy manifesto warning Europe that the Rosicrucians were about to make it over in the image of the wise Arabs of Damcar. Like its predecessor this book is obvious Lutheran propaganda, for it calls the pope "Antichrist" and uses a rose-and-cross motif derived from Martin Luther's seal.

THE THIRD book of the Rosicrucian canon, *The Chymical Marriage of Christian Rosenkreuz, Anno* 1459, first mentioned the mysterious Rosenkreuz by name. This work belongs to a class of alchemistic-mystical writings which describe a dream-like sequence of fantastic adventures in a world of alchemical symbols.

The Chymical Marriage tells how a lovely female angel delivered to the narrator an invitation to a royal wedding, and how he stuck four roses in his hat and set out. After wondering which of four ways to take, he arrived at a "stately portal" and was admitted. Passing through a series of gates he encountered adventures with a lion, a Virgin, and a troop of invisible barbers. Finally he came upon a disorderly banquet, plainly a satire on seventeenth-century Europe, with boasters and charlatans robbing simple-minded noblemen. Another Virgin weighed everybody; those who were not heavy enough were stripped, whipped, beheaded, or otherwise punished. The narrator witnessed the beheading and resurrections of six royal personages, and accidentally came upon a naked sleeping Venus, for which sin he too was punished.

Such narratives abound in alchemical treatises. Their imagery is often patently sexual, as when in Madathanas' *Golden Age Restored* King Solon has his harem stripped for the inspection of the narrator and gives him one of the girls. These compositions may be considered either as Freudian wish-fulfillment dream-sequences, or as disguised alchemical recipes,

Elxirs of Love were in the province of Magic, not alcherage.

or, by a Herculean effort of the imagination, as both at once.

The Rosicrucian manifestoes aroused much excitement. Some men did publish letters as directed; but as far as is known, none ever re- no such society existed.

THE LIKELIEST author of the original Rosicrucian pamphlets is Johann Valentin Andreae, an earnest young Lutheran pastor with a mania for reforming the world by secret societies. In his posthumuosly-published autobiography, Andreae made the remarkable claim to have written the *Chymical Marriage* at fifteen. It has been suspected that Andreae wrote the manifestoes either as a hoax or in the real hope of starting such a society, but that he got cold feet when the replies began to come in.

In any case, the manifestoes were evidently the work of one or more Lutheran Paracelsans who believed in elemental spirits, the doctrine of signatures, and pseudo-alchemistic mysticism: plainly men of the seventeenth century and not ancient Egyptians, Pythagoreans, or Atlanteans, who have been credited in more recent times with originating Rosicrucianism. Possibly the Rosicrucians were connected with the *Militia Crucifera Evangelica,* or Cross-Bearing Evangelical Militia—a sort of Lutheran storm-troop, established some years before in Nuernberg by the alchemist Simon Studion. The exact truth, like much else in ceived an answer. Probably occult history, is probably gone beyond recovery.

Among those taken in by the original manifestoes, the German alchemist Count Michael Maier (1568-1622) wrote in defense of the Rosi-

crucians without ever having seen one. His example was followed by the mystic Vaughan, and the astrologer John Heydon. The latter, a picturesque character who kept a familiar spirit named Taphzabnezelthartharaseraphimarah, wrote of visiting a fabulous underground Rosicrucian castle in the west of England, with jewelled tableware, and of voyaging to a gilded Rosicrucian utopia on an island in the Arabian Sea. Later on, novelists like Bulwer-Lytton and Franz Hartmann used the Rosicrucian theme in their stories.

SUCH PUBLICITY kept the Rosicrucians in the public mind. There have been a multitude of "Rosicrucian" societies from that day to this, each claiming identity with the original Rosicrucians of Andreae's time, while calling all other claimants impostors. In the nineteenth century some English Masons formed a *Societas Rosicruciana in Anglia* with Dr. W. Wynn Westcott as Supreme Magus. Their main accomplishment was serving annual banquets to the members and collecting five shillings a year from them. Simliar clubs have appeared from time to time in France and Germany.

In modern America, Rosicrucianism is represented by George Winslow Plummer's Society of Rosicrucians; by Max Heindel's Rosicrucian Fellowship; by R. Swinburne Clymer's Rosicrucian Foundation; and by Herve Spencer Lewis' Ancient and Mystical Order Rosae Crucis.

These little cliques continually spring up with claims to immense antiquity and transcendental wisdom, split like amebas, and die out, leaving a fossil deposit of books and pamphlets in libraries. Some publish inspirational

and occult literature; some give correspondence-courses in occultism, purveying doctrines from various transcendental sources such as Neoplatonism, Kabbalism, Theosophy, and New Thought. They generally claim that their alchemy is moral or metaphysical, though they hint that the high-degree members sometimes make a little gold just to keep their hands in. They quarrel furiously, each claiming that while it is a "secret" society, its rivals are "clandestine." The dictionary says that "*clandestine*" means the same as "*secret*," but in fraternal circles "clandestine" has a sinister connotation.

Occult fraternities flourish because people persist in hoping for a modern equivalent of the Philosopher's stone, to transmute the base metal of everyday life into the gold of utopian happiness. Like the alchemists they are doomed to failure, because the Stone does not exist. Chemistry got somewhere when it abandoned the methods of magic for those of science, so it is at least conceivable that the same might apply to other human affairs.

★

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, AND JULY 2, 1946 (Title 39, United States Code, Section 233) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF

Science Fiction Stories published bimonthly at Holyoke, Mass. for October 1, 1956.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher Louis H. Silberkleit, 241 Church St., New York 13, N. Y., editor, Robert W. Lowndes, 241 Church St., New York 13, N. Y., managing editor, Robert W. Lowndes, 241 Church Street. New York 13, N. Y., business manager, Maurice Coyne, 241 Church Street. New York 13, N. Y.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Columbia Publications, Inc., 241 Church Street, New York 13, N.Y., Louis H. Silberkleit, 241 Church Street, New York 13, N. Y., Maurice Coyne, 241 Church Street, New York 13, N.Y., Michael I. Silberkleit. 241 Church Street, New York 13, N.Y.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total securities are: (If there are none, so state.) (NONE.)

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required from daily, weekly, semiweekly, and triweekly newspapers only.)

Louis H. Silberkleit (Signature of publisher,) Sworn to and subscribed before me this 5th day of October, 1956. (My commission expires March 30, 1958)

MAURICE COYNE
NOTARY PUBLIC, State of New York
No. 03-5844500
Qualified in Bronx County
Commission expires March 30, 1958

Let's see now — you can't change the past; if you went back in time, say a day or two, you'd just find yourself repeating what had already happened. But suppose you could skip ahead an hour or two, every now and then. Why — you could go back to that blank period at will, and fill it in as you liked, couldn't you?

TEMPUS NON FUGIT

by GORDON R. DICKSON

(author of "No More Barriers")

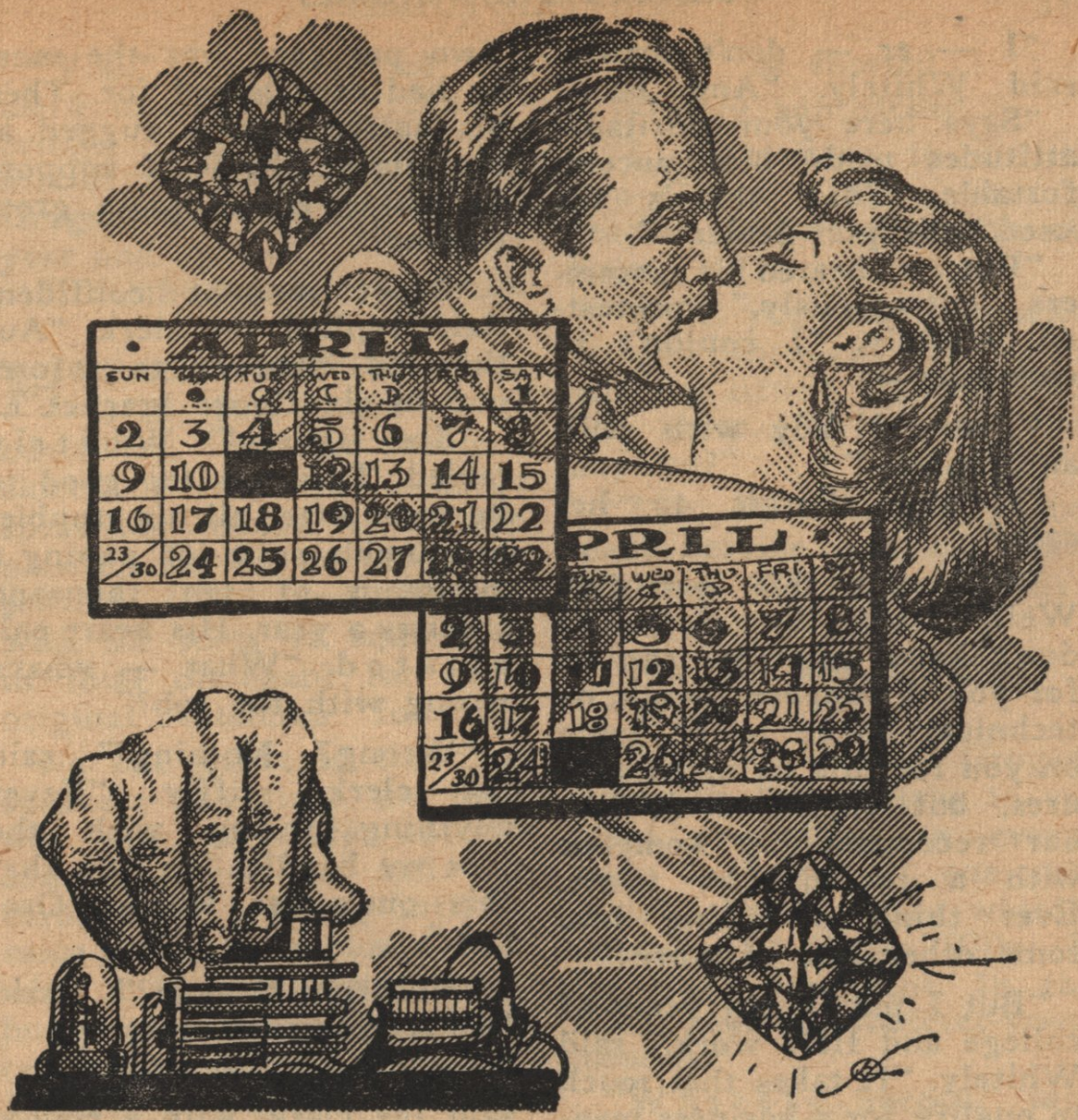
THE DESK CLERK at the placement service sighed. "You again?"

"Yes," said Whitely Spence unhappily. He was a little man with a little voice; it always annoyed him. No matter how he tried to sound as if it did not matter how other people felt about him, that voice of his would insist on giving him away. Right now, he was suffering under the clerk's scorn and his voice revealed the fact.

"What went wrong this time?" demanded the clerk.

"My — er — employer absconded with the funds for the charity drive," said Whitely, meekly.

"Oh, it was *that* guy, was



it?" said the clerk. "I was reading about it in the newsfax. Well, I suppose now you want us to find you something else?"

"If you don't mind."

"Well, I don't know," grumbled the clerk, punching buttons on the desk before him. "We don't have too much call for private business managers, anyway, and with your record — " there was a buzz, and a screen set in the desk before him lit up with Whitely's dossier—" we've fixed you up with five different employers, and you haven't been able to stick with any of them. There was this boxer first—"

"But he got married, and his wife made him quit," said Whitely, hurriedly. "He didn't need me any more."

"Then this rich fella; all you had to do was keep track of his investments — "

"I — er — don't drink," said Whitely. "And he—"

"Says here your puritanic attitudes made him uncomfortable. Then there's the used helicopter dealer—"

"But he cheated his customers outrageously," protested Whitely. "I couldn't in concience—"

"The old lady with philanthropies—"

"I was allergic to her cats."

"And now this last guy. Well," said the clerk. "I don't know what we can do for you. I suppose there's no technical blame to be hung on you for this string of failures, but clients don't like our recommending someone with a record like yours. Ever think of going into some other line of work?"

"But I put in ten years of college and field work," said Whitely. "It takes that much to qualify for a business manager's private certificate. You must have something."

"WELLLL," drawled the clerk, "I don't say we don't. But I don't recommend it." He punched a few more buttons, and a new series of lines flipped into existence on his desk screen. "There's one chance here. An inventor. Ten percent of his gross income to his business manager."

"Ten per cent!" Whitely goggled at this liberality. Two per cent was the most he had ever hoped for. Then his native caution tugged at his elbow. "Er — I suppose he makes an adequate gross income?"

"Strict amount confidential," replied the clerk. "Authorized however to inform you in six figure bracket."

"Six figures!" Whitely reeled. This was too good to be true. After all his trouble, to stumble on a job paying a minimum of ten thousand credites a year. His heart palpitated. "What — what's wrong with the job?"

"Wrong? Nothing!" said the clerk, stiffly. "Never anything wrong with the jobs we handle. It's just that this one's for Hobart Grogan."

"Hobart Grogan?" said Whitely, mystified.

"Don't know him? Well—" said the clerk, with a cough. "He's a bit eccentric; you know how inventors are. The last dozen or so managers we've sent him all quit. Up to you, of course."

Whitely thought it over. On one hand, the job for this unknown and rather terrifying-sounding inventor; on the other hand—Whitely thought of the fact that there remained less than twenty credits in his central account, and that all the other placement agencies in town had turned him down.

"You," the voice of the clerk interrupted his considerings, "might be just the sort of man to get along with Grogan. And ten thousand a year and up — "

"I'll take it," said Whitely.

HOBART GROGAN, true to the best tenets of eccentricity, lived on the outskirts of town, in a large sprawling house of bubble plastic, the rooms of which seemed filled and jammed with all sorts of equipment in total disregard for their original intended function.

No one answered the door speaker; and since the door was ajar, Whitely entered and wandered to and fro through the building until he came at last to a closed door with a *do not disturb* sign hung upon it. Whitely hesitated for a moment, then diffidently knocked.

Silence.

He knocked again; somewhat harder this time.

"Come in!" barked an irascible voice.

Whitely gulped, adjusted his tunic scarf, and entered. In a small, square room littered with papers, a comfortable couch and an over-size desk, a tall, thin man with a red beard sat busily rattling away at a typer. He did not look up as Whitely entered. His eyes continued to glare at the page in his typer, and his beard bristled.

"Bah!" he snorted.

Whitely approached.

"I don't mean to disturb you—" he began, having reached Hobart Grogan's elbow.

"Well you are," growled Grogan through his beard, still not lifting his eyes from his typer. "Who are you, anyway?"

"The Professional Placement Service sent me," said Whitely. "I'm a b u s i n e s s manager. I—"

"File B," said Grogan.

"What?"

"File B!" roared Grogan, suddenly. "Do I have to explain everything to everybody in words of one syllable? Damn the world's numbskulls! B for Bills; B for Bank statement. In the filing cabinet, whatever-your-name-is."

"W h i t e l y Spence," said Whitely, faintly.

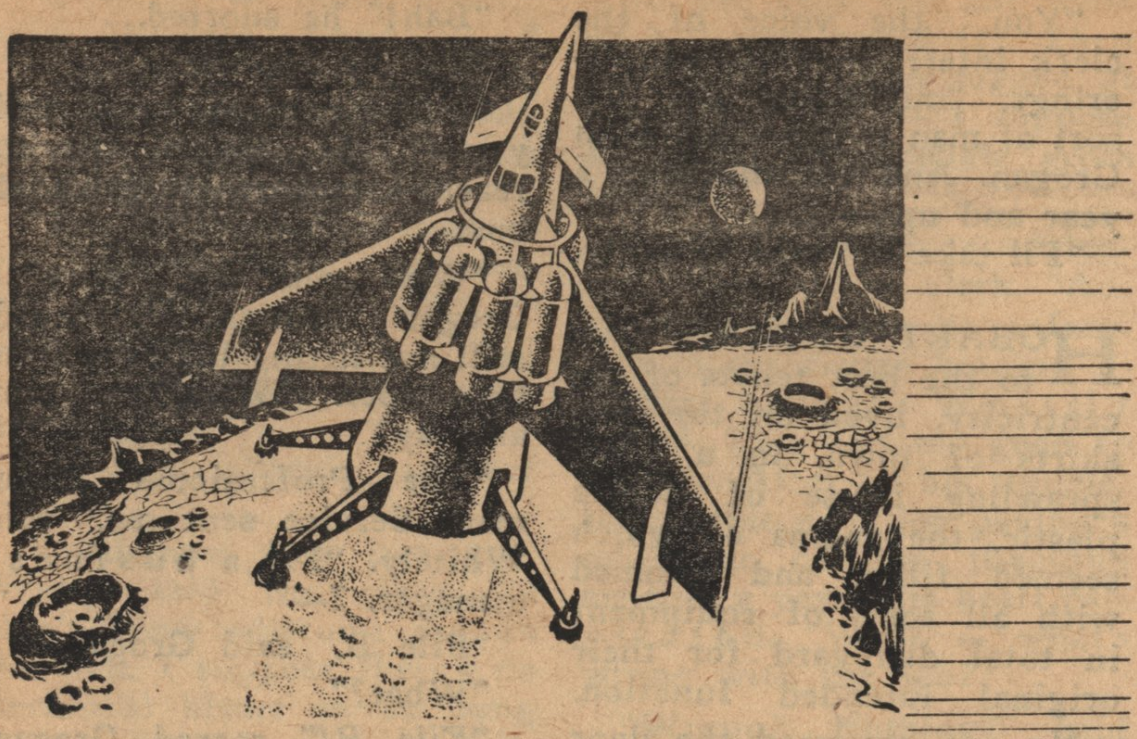
"B, Spence! B! Be astute! Be alive. B a l a n c e my accounts."

SOMEWHAT s t u n n e d, Whitely tottered over to the filing cabinet found the file in question (crammed with bills) and went to work. At the end of half an hour, he shyly approached Grogan who was still typing.

"Er — Mr. Grogan —" he said.

Grogan said nothing.

"M r. G r o g a n," went on



Whitely, his voice gaining firmness. "You seem to be somewhat in debt."

Still, Grogan said nothing.

"You seem," said Whitely, "to have run up a bill with United Electronics for six thousand, two hundred and fifty credits. Your bank balance shows only one thousand, nine hundred and thirty-one credits, leaving a deficit of four thousand, three hundred and nineteen credits." He waited.

"Mr. Grogan—"

"Shut up will you!" said Grogan, suddenly. "I want to finish this silly story."

Whitely stared.

"Silly story?" he echoed in something like a squeak.

The typer machine-gunned on for a few lines, then stopped abruptly.

"Certainly, silly s t o r y," said Grogan, complacently, turning from the typer. "A story which is silly; I write them for my own amusement."

To prove his point, he glanced at the last page he had written and burst into a guffaw of laughter, his red beard jiggling madly.

"Listen to this — " he began.

"Mr. Grogan!" interrupted Whitely firmly. He was determined to make a success of this last chance of his; he told himself that it was going to be necessary to be decisive with his employer. "This is no time for stories, silly or otherwise. The amount lacking to meet your current committments is four thousand, three hundred and

nineteen credits. As your business manager, I want to know if you have any means of raising it."

"Certainly," said Grogan. "Sell something."

"Sell what?"

'Anything," said Grogan with an airy wave of his hand. "Don't bother me with details; just take something and sell it. Simple procedure," he muttered into his beard. "Don't know why *I* have to be the one to suggest things all the time."

WHITELY quivered inside like a vanilla pudding, but his courage was up. "Grogan!" he said, manfully. "This won't do. I don't know what you will want to keep and what you won't want to. You—"

"Bah!" snorted Grogan, exploding out of his chair. He shot out of the room and returned a moment later with a small device somewhat resembling an archaic crystal set, which he shoved into Whitely's hands. "Here!" he roared.

Whitely took it, hesitantly. "What is it?"

"A temporal determinant," said Grogan.

Whitely Spence gulped. Past experience had taught him that employers hated explaining themselves. "What?" inquired Whitely "is a temporal determinant?"

Grogan, it seemed, was no exception to the general rule about employers. He immediately began to swear at Whitely in something that sounded like Low Dutch. "—stupid oaf!" he thundered, emerging at last into English. "What could a temporal determinant be, but a determinant of temporal factors? In other words, fool, it determins what time it is."

"A sort of clock?" hazarded Whitely, weakly.

"Not clock, idiot!" snarled Grogan. "A clock *notes* time, it doesn't *determine* it. You look at a clock to find out what time it is; you set this to make it the time you want."

REALISATION struck Whitely like a thunderbolt. A warm, blissful wave flowed over him and visions of million dollar check (made out to Grogan) and hundred thousand dollar checks (made out to W. Spence) danced before his eyes.

"A time machine," he breathed. He touched it with trembling, reverent fingers. "Can I try it now?"

Grogan reached over and touched a small dial on the set. "Forward, or back?"

Whitely hesitated. Maybe it might be dangerous.

"Back," he said. "About half an hour or so."

Grogan twisted the dial. The room vanished.

Whitely knocked diffidently at the door.

Silence.

He knocked again, somewhat harder this time.

"Come in!" barked an irascible voice.

He gulped, adjusted his tunic scarf and entered —

But this is ridiculous, thought Whitey. I'm just doing the same thing over again. And he strained desperately against the unbreakable fabric of the Established Past, but could not alter it. Only with the Temporal Determinant, that was outside of Time, and independent of it, did he have freedom of action. Frantically he twisted the dial in the opposite direction.

IT WAS night. The room was the same, except that Grogan was placidly smoking a pipe in a corner and listening to Brahms Second Symphony on his colorecorder.

"There you are finally," said Grogan. "You must have gone to the full forward limit of the Determinant."

Whitely drew a deep, relieved breath. "What is the limit?"

"Seven hours and twenty-three minutes — approximately," said Grogan. "After that, the probability index drops below the line of precise logical development. I could show you the mathematics—but then you wouldn't understand it, anyway. Of course you can go as far back along your own lifeline as you wish, although if you went too far back there might be some practical considerations preventing your return. However — you'd better be getting back."

"Getting back?" echoed Whitely.

"Certainly," said Grogan. "Back to the point at which you started your movements in time. It's now nine o'clock at night. After you came from here this afternoon, you talked to me for a couple of minutes and then dashed out as if your tail was on fire."

"Where was I going?" asked Whitely.

"You didn't say," replied Grogan, dryly; and, reaching over, twisted the dial back to its orignial position.

"SATISFIED?" asked Grogan.

Whitely looked around him. It was daylight again; the Determinant was still in his hands.

"Where am I going?" he demanded excitedly.

"What do you mean— "where are you going?" snapped Grogan. "Try to be explicit Whitely. I know it's a strain, but try."

"I was just seven hours and twenty-three minutes— or something like that—in

the future," babbled Whitely. "And you said that after I got back here, I went someplace suddenly. And—since I haven't actually gone, yet, I don't know where I went. I thought you could tell me where to go."

Grogan's face lit up with a happy smile. "Bless you, Whitely; you have brightened my day for me. It's so seldom in a man's life that opportunities like this occur. Of course I'll tell you where to go."

And he did—in detail. It took about five minutes.

"That wasn't," said Whitely, indignantly, after Grogan had finished, "what I meant."

"Naturally not," answered Grogan, and burst into a roar of laughter.

"Well," said Whitely, redfaced, after Grogan's guffaws had toned down to chuckles, "you might tell me why I found myself repeating what I'd done before, on my trip into the past."

Grogan sobbered up. "The past is immutable. All this hogwash about alternate futures is so much pig swill."

"Oh," said Whitely, and lasped into thoughtful silence.

"Well," rasped Grogan, impatiently. "You wanted something to make money from, to pay that little bill of mine. Take the blasted thing out and sell it, or hock it, or something."

"Sell?" muttered Whitely. "Hock? No, no—license, that's what we'll do with it."

And, with that, he rushed out the door.

UNITED ELECTRONICS was a large outfit. It not only sold to people like Grogan, it also bought from people like him when they came up with something United Electronics would find useful. And Whitely already had a nodding acquaintance with the purchasing agent, as a result of his short interlude with the rich gentleman who had been offended by Whitely's lack of taste for liquor. Consequently, it was to United Electronics that Whitely betook himself as soon as he had taken the trouble of putting the Determinant under interim registration at the local branch of the patent office.

The purchasing agent, however, was out when Whitely arrived; consequently Whitely had no choice but to sit in a state of miserable impatience for three hours. Trying to track the U.E. man down through the maze of buildings would only have resulted in Whitely's missing him altogether. Whitely found himself as he sat wishing rather wistfully that Grogan would invent a device for tracking down pur-

chasing agents. But no, somehow Whitely felt in his bones that what Grogan would invent would always be something *he*, needed, or found interesting.

Eventually, however, the man in question, a thin, forty-year old by the name of Cooper McBray, returned.

"Ah, Spence," he said smoothly. "You wanted to see me?"

WHITELY looked at this complacent, thinning-haired figure in its neat business suit of tweed; a vicious desire to ruffle the man's calm posessed him. "For three hours," he said , between clenched teeth, "I've been sitting here with a device that can make five million a year for the firm that market's it—and you ask me if I want to see you."

"Now, now, Spence," said McBray, who was used to exaggerated claims, "haste makes waste, you know. Come into the office, here." He led the way into the panelled room that was his headquarters.

"Now," He repeated, sitting down and waving Whitely into a chair, "what have you got, Spence? My secretary says you're with Grogan. Never met him, myself, but I understand he's a firecracker. What's the gimmick?"

"The gimmick, as you put it," said Whitely, leaning across the desk toward him, "is a Temporal Determinant."

"And what," asked McBray, "is a temporal determinant?"

For a moment, Whitely felt a small wistful desire to be able to swear in Low Dutch. Bravely, he squelched the wish. "To you," he said dryly, "a time machine."

McBray leaned back in his chair and laughed until tears glistened in his eyes.

"Well, well, well," he said. "So it's a time machine, is it?"

"Yes," said Whitely. "It is."

McBray leaned forward and wiped his eyes. "Come now, Spence," he said. "After all, my working day is rather a full one. And you've had your joke. Now, what is it you've really got, there."

Whitely leaned forward and put the Temporal Determinant in McBray's hands. "Which way," he asked, "would you like to go. Forward in time? Or back?"

"Oh, let's say—back," answered McBray, with a chuckle. He was still chuckling when Spence set the dial for five minutes earlier.

FROM SPENCE'S point of view, the proceedings were unspectacular. One minute, McBray was beaming with merriment; the next, he

was sitting back abruptly in the chair behind his desk, his face grave, his forehead beaded with sweat.

Whitely leaned over and took the Temporal Determinant from his unresisting hands. "Good Lord!" gasped McBray.

"You had to live through those last five minutes of your life all over again, didn't you?" said Whitely.

"I couldn't do anything about it—it was awful—" the purchasing agent began to pull himself together. He wiped his face with a shaking hand. "I'll concede you've got something valuable there, Spence. How much do you want for it?"

"It's not for sale," replied Whitely, succinctly. "But we might be persuaded to license your manufacture of the Temporal Determinant at a hundred thousand a year."

McBray started up out of his chair. "A hundred thou—you're crazy, man!"

Whitely shrugged; it felt good to be on the dominant side for a change. "You can see for yourself," he said, balancing the Temporal Determinant carelessly in one hand, "there's nothing much to the manufacture of the device. And we guarantee it for seven hours and twenty-three minutes into the future, and as far as you wish into the past along your own lifeline. There's lots of small companies that would hock their eyeteeth to get the advantage over U.E. that this would give them."

"But a hundred thousand a year! I've got no authority to make that kind of deal."

"In that case," said Whitely, sweetly, "I suggest you take me to someone who has."

"Why—" spluttered McBray, "Nobody but the President of the Board could—I'd be laughed out of my job if I took you to him with a proposal like that."

Whitely got to his feet. "In that case, I'd better be going."

McBray came swiftly around the desk to intercept him. "Never mind," he said grimly. "You know I can't take the risk of letting this get out of my hands. The whole matter will go to old Conninger, after his office hours—and the blood of us both "be on your head!"

CYRIL P. CONNINGER, President of United Electronics, was a man who liked good food. He was also a man, who, when he said a thing, meant it; people who did not recognise this fact were not long associated with Cyril P. Conninger.

Consequently, it was, that after having spent several tiresome hours in locating the President of the Board at his Golden Hills estate and driving out there, Whitely

Spence and McBray were further constrained to wait while Conninger finished a leisurely and extensive dinner. Conninger had made it a rule never to be interrupted at meals, the iron-faced butler informed McBray of this fact. McBray sat down with a sigh to wait. So, perforce, did Whitely.

Finally, at some indeterminate time after 8:30 (Whitely's watch, perhaps somewhat baffled by its experiences with Time, seemed to have given up running at all) he found himself face-to-face with his potential customer.

"Well, McBray," said Conninger, settling heavily into an overstuffed chair in the library. "Whozis? Hah?"

"Excuse us for butting in this way, Mr. Conninger," replied the purchasing agent, nervously. "But Mr. Spence here has a rather unusual item, the manufacture rights of which he wants to license to us for a rather high sum."

"Ho?" said the President of United Electronics. "Hah?" He looked at Whitely curiously, as if doubtful whether that individual wasn't something that the second maid should be called to sweep up and carry out on a dustpan."

He has," said the perspiring McBray, "a time-travelling device."

"Heh?" ejaculated Conninger, startled. Then, as comprehension struck him—"Haw! Haw!"

"You can laugh," snapped Whitely. "But I've got it and it works. If some other company gets it they could put United Electronics out of business in one year."

CYRIL P. CONNINGER'S good humor evaporated somewhat suddenly. These were fighting words. "Ho?" he barked. "Izato? Lemmeseeit! Whatzit?"

Whitely exhibited the Temporal Determinant. "You can go either forward or backward in time." He smiled enticingly.

"Would you care for a demonstration?"

"Uh!" grunted Conninger, in vigorous affirmative.

Whitely thrust the device into the other man's hands. He twisted the dial.

"Ho—" began Conninger in alarm. He was cut off abruptly, sat perfectly motionless for a second, then began to tremble violently. His face had turned a decided green.

"Mr. Conninger!" cried McBray, alarmed. "Are you all right?"

The President of the Board gulped, choked, swallowed and finally found voice. "*All right*, you damn fool! *All right*, you stupid idiot! Of course I'm not all right. How would you feel

if you had just eaten two full size dinners in a row?"

He groaned, massaging his ample stomach tenderly. Whitely took advantage of the diversion to repossess himself of the Determinant.

"Hey!" cried Conninger, realising his loss. "Gimme that here!"

"Not," said Whitely, smoothly, "until you've agreed to my terms."

"Terms? Hey! What terms?"

"One—one hundred thousand a year for manufacturing rights," quavered McBray.

"One hundred—gug!" choked Conniger. He quivered as if the Temporal Determinant had just made another assault on his stomach. Then, because he was after all a businessman, he said—five thousand."

"Goodby," said Whitely.

"Sixty thousand."

"Don't be ridiculous."

"All right, blast you, sixty-five thousand."

WHITELY came over and patted Cyril P. Conninger on the shoulder. Something that had never been done to him before in the memory of anyone connected with United Electronics.

"I realise," said Whitely, "that you're actually trying to make a deal. The trouble is just that you're too used to thinking in terms of these piddling little sums. I'll tell you what I'll do. I'll drop my price to ninety-five thousand to show that small considerations don't weigh with me. Now you can tell the Board that you saved them some money."

Conninger purpled and opened his mouth. It turned out that he, also, could swear in Low Dutch—or at least something that sounded remarkably like it.

"—and seventy-five thousand is my last offer. Not a tenth-credit more; and be damned to you!"

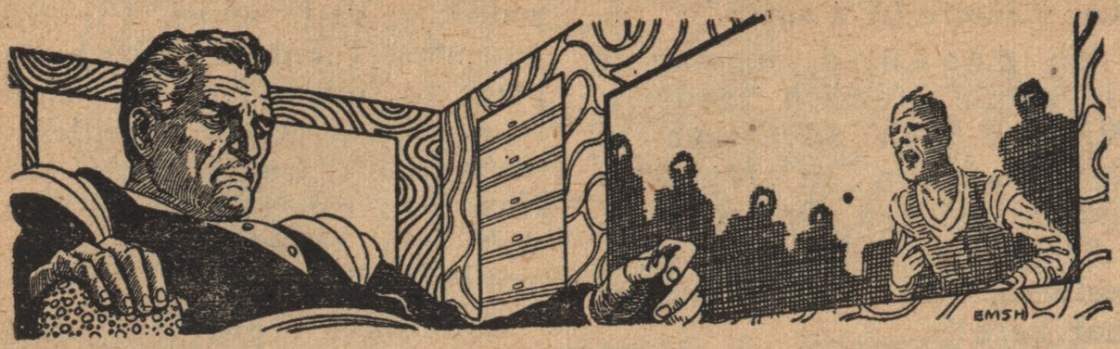
Whitely smiled. Actually, seventy-five thousand was far more than he had expected. He leaned forward and spoke very distinctly. "I'll take—" he began—and disappeared.

IT WAS night. The room was Grogan's room. He was placidly smoking a pipe in one corner and listening to Brahms' Second Symphony on his colorecorder.

"There you are finally," said Grogan. "You must have gone forward to the full limit of the Determinant."

Whitely drew a deep, relieved breath. "What is the limit?"

"Seven hours and twenty-three minutes — approximately," said Grogan. "After that the probability index drops below the line of precise log-



ical development. I could show you the mathematics—but then you wouldn't understand it anyway. Of course you can go as far back along your own lifeline as you wish, although if you went too far back, there might be some practical considerations preventing your return. However you'd better be getting back."

"Getting back?" echoed Whitely.

"Certainly," said Grogan. "Back to the point at which you started your movements in time. It's now nine o'clock at night. After you came from here this afternoon, you talked to me for a couple of minutes and then dashed out as if your tail was on fire."

"Where was I going?" asked Whitely.

"You didn't say," replied Grogan, dryly; and, reaching over, twisted the dial back to its original position.

Then Whitely was back in the library of Cyril P. Conninger. "I'll take seventy-five thousand," he said, hastily.

Silence greeted this remark. Whitely looked from president to purchasing agent, from Conninger to McBray, and felt his heart sink as he noticed a subtle and unfavorable difference in the attitudes of the two facing him.

What had happened?

And then realisation struck him. He had not come back to the same moment he had left. Instead, he had been missing for a length of time equal to that which his conversation with Grogan had required. And in that time—he could tell it by the sly looks on their faces—Conninger and McBray had cooked up something between them.

"Ho, ho," chortled Conninger.

"Heh, heh, heh," rasped McBray.

"Seventy-five thousand," echoed Conninger, "he says."

"Don't tell me you took our little joke seriously," said McBray.

"Yes," said Whitely, grim-

ly. "I did and do. Do you want to talk business, or don't you?"

"COME NOW, Spence," said McBray. "You didn't really think that we'd pay seventy-five thousand a year for the rights to manufacture a mere toy?"

"Toy?" said Whitely.

"Toy," said McBray. "I imagine some people might find it entertaining to repeat small portions of their lives—but hardly at the cost of buying such an expensive gadget as this. But nobody in his senses would want to shorten his apparent life by hopping seven hours and some minutes into the future. I really can't think of any good commercial use for the Determinant. And on the other hand, think of the uncertainty, the danger. Rather a dangerous gadget, don't you think, Mr. Conninger?"

"Absolutely, McBray," replied Conninger. "Ought to be a law. "Dangerous plaything. No good use for it Might write the papers about it myself if it shows up on the market."

"Of course, Spence," said McBray, delicately, I suppose we could still buy it from you—merely as a curiosity for development in our own labs. But the price would be closer to seven hundred and fifty than seventy-five thousand credits. That, I would say, is about what it's worth. Since we can't think of any practical use for it. Or can you, Spence?"

Whitely thought desperately.

Could he?

He could not.

"Well?" said McBray.

For once in Whitely's life anger got the better of his good nature and exploded out of him.

"No, I can't!" he snapped, jumping to his feet. "But I'll tell you one thing. Practical use, or no practical use, you're not getting your hands on this. And what's more, I'll bet there *is* a practical use, and I'm going to find it. And then if you want it, you're going to have to pay through the nose for it!"

And he stalked out.

ON HIS way back to Grogan's, Whitely contemminant sadly. It was all very plated the Temporal Deterwell to say confidently that he was going to find a use for it; but it was another matter entirely to go about doing so. He chewed his lower lip thoughtfully. McBray and Conninger's game was clear. They would start circulating the word that the T.D. was dangerous and uncommercial, and that they had turned it down for that reason. With such a rumor circulating none of the small-

er outfits would dare touch it. Of course, someone would take it eventually; but by that time the Conninger labs, briefed by McBray's skilled observation of the Determinant Whitely had showed him, would be well on the way to coming out with their own Determinant, with just enough change to get around the patent laws. Whitely's and Grogan's only hope was to get the Determinant on the market first.

There *must* be some sort of practical use for the thing. Whitely knotted his brows. Perhaps he and Grogan could try manufacturing Temporal Determinants on a small scale themselves and selling them to retail outlets as curiosities...

"GROGAN," said Whitely, coming into Grogan's room a few minutes later. "How much did it cost us to make the Temporal Determinant?"

Grogan was once more busy at the typer. "Don't interrupt me," he growled. "I'm having a small scientific discussion with one of these Europeans. What's a colloquial phrase in German meaning 'obstinate moron'?"

"Why, I don't know," said Whitely, caught off balance.

"I hate to use the word *dumkopf* again," reflected Grogan. "I've already used it twelve times in this one letter. Oh, well—"

His typer rattled busily for a moment, then stopped.

"Now," he said, turning to Whitely. "What was that? Oh, cost. Let me see—there, about four hundred and fifty credits worth of parts there, and of course my own time would be worth at least another thousand—insofar as you *can* put a price on time as valuable as mine."

"Four hundred and fifty credits worth of parts!" echoed Whitely weakly.

"Naturally," said Grogan. "I hate making anything out of cheap "shoddy" materials. That little round affair that looks like a button is really a bank of fifteen microcells matched to my specifications. And those insulators, though you can't see them, are commercial diamonds because of their useful heat conductivity."

"Couldn't," quavered Whitely, "couldn't the Temporal Determinant possibly be made out of material just a little less expensive?"

"What?" snorted Grogan, wrathfully. "I'd as soon cut off my right arm—and anyway, no, it couldn't."

Spence groaned and sat down heavily. "It's no good, then."

Grogan's beard bristled. "Something *I* made?" he thundered. *"No good?"*

Whitely quivered.

"What I mean is," he explained. "There's no commercial use for the T.D."

"Why in the devil's name should there be?"

"Look, Mr. Grogan," explained Whitely, desperately. "Nobody will pay us for the T.D. unless they think they can make money themselves off it." And he told Grogan about his interview with Conninger and McBray.

"Bah!" erupted Grogan, when he had finished. "People are imbeciles, I'll go talk to them, myself."

Whitely jumped to his feet, his face lighting up with hope. "Do you know a use for the T.D., then?"

"Of course not!" snapped Grogan. "But we've got to fly out to Conninger's place. I'll think up a use on the way."

MR. CONNINGER and Mr. McBray were occupied, the impenetrable butler informed them when they arrived. It was too late and they had left orders not to be disturbed, particularly by any gentlemen whose initials were W. S. He regretted therefore, but—"

"Don't," interrupted Grogan harshly, at this point in the conversation.

The butler raised his eyebrows with lofty scorn. "Don't?" he echoed, with amused tolerance.

"Don't regret it; because we're going in anyway," snapped Grogan. "Just scuttle on down the hall there and inform your Mr. Connin-

ger that Hobart Grogan is here to see him."

Slowly, the iron visage of the butler crumpled and softened. A worshipful look came into his eyes. "Hobart Grogan?"

"The same," said Grogan.

"Not—not—" stammered the butler, "the Hobart Grogan who wrote the article entitled *The Application of the Theory of Finite Discontinuity of Functions to States of Quantised Probability, in the* December issue of the *Mathematical Journal?*"

"I am," said Grogan.

"Sir," said the butler, "may I have the honor of shaking your hand?"

"You may," said Grogan.

They shook hands.

"And now, sir," said the butler. "Mr. Conninger will see you in the library."

"But—but you said—" stammered Whitely.

"SIR," SAID the butler, simply, "there are in the world today, over eight hundred men equal in position and financial resources to Mr. Conninger; but there are only seventy-three bona-fide butlers."

He inclined his head and stalked off down the hall. Inside of a couple of minutes he returned. "Mr. Conninger will see you now, gentlemen."

WHITELY and Grogan went down the hall and into the library.

"Well?" demanded McBray, nastily, as they entered.

"Are you Conninger?" asked Grogan, looking at the purchasing agent inquiringly.

"No," answered McBray, "I'm—"

"Then what the devil are you interrupting the conversation for?" snapped Grogan. "I came here to talk to Conninger. Who's Conninger?"

"I am," said the President of the Board of United Electronics.

"Whitely tells me you can't think of a use for my Temporal Determinant."

"I—" began Conninger.

"Shut up," said Grogan, peevishly. "Nobody has any manners these days—interrupting all the time. I should, of course, have forseen this eventuality. Any businessman with imagination would hardly waste his time in business. The obvious solution to the problem of course is for you to market the Temporal Determinant under some such snappy title as the Handy Pocket Timesaver."

"But it doesn't save time," objected McBray.

"*Ass!*" roared Grogan, turning on the purchasing agent. "Of course it doesn't, Time is inelastic and permanent. No man has more of it than can be contained in his lifetime. However, judi-

cious use of the Temporal Determinant will allow people to make profitable use of time that is otherwise wasted. — Moron!" He glowered at McBray.

"Hey!" said Conninger, rousing himself to articulate speech. "How?"

Grogan drew a long, patient breath.

"For the benefit of your limited perceptions," he said, "I will diagram the procedure. One Sunday afternoon, you find yourself at home with nothing to do for four hours. So, with the Temporal Determinant you jump ahead to dinner time. On the following Monday, you find yourself with an interesting little problem in tensor calculus but not the time to work it out in. So you hop back to Sunday afternoon and fill in the vacant four hours with your problem, and whatever other small enthusiasms occur to you. If, of course, you had sat around doing nothing all Sunday afternoon, the time would be filled; and if then you went back via the Temporal Determinant, you would simply have to live through the period of sitting around, again. But, since you hopped over those four hours, they remain a blank space in time that you can later use for any activity you like."

McBray said, "Sure, I get it. And if you can expand the period, then we can put it on a more popular level, say that a fellow's all ready to bring his girl friend a diamond ring—on, oh, April 11th. That is, he expects the cash in that day. Then he learns that it won't come through until April 25th.

"So he hops ahead to April 25th, picks up the dough and takes it back to the 11th. Then he can buy the ring when he planned, and he and his tootsie'll be happy."

There was a moment of silence in the library. Then Whitely spoke up. "And," he said, making no attempt to keep the triumph out of his voice, "we'll license the rights to manufacture to you for—"

"Four thousand, three hundred and nineteen credits," interrupted Grogan.

"No!" shrieked Whitely, "you—"

"Wasn't that the amount you said we needed?" asked Grogan.

"Yes, but—" cried Whitely, "it's not enough. I—"

"Quite right!" said Grogan, "I'm glad you reminded me. My trip over here, and my valuable advice will have to be charged for. Five thousand, three hundred and nineteen credits, Conninger."

"Done!" cried the President of United Electronics. leaping from his chair with surprising agility. "Here I'll scratch down a temporary contract and you can sign

over now. Got a pen, McBray? Gimme! Thanks."

"Very good," said Grogan, reading over Conninger's shoulder as the pen traveled furiously across the paper. "I'll be glad to sign. What are you choking for, Whitely? Nonsense, don't bother me now. How many times must I harp on the bad manners of interruptions. Take a lesson from me. I *never* interrupt. Courtesy, to my mind, is beyond price. — The pen? Thanks."

Grogan signed.

"A FINE stroke of business," said Grogan, as they drove back to his house. "Even if I had to do it all myself. Simple enough to beat these businessmen at their own game if you simply keep your wits about you!"

"You—" stuttered Whitely, finally finding his voice. "They offered me seventy-five thousand for that license earlier today. And they would have paid eighty-five. That's what I was trying to tell you before you signed, but you kept shutting me up."

His words rang somewhat wildly in the close compartment of Grogan's helicopter, in which they were winging their way homeward through the night. At the controls, Grogan sat impassively, now and then touching the pitch controls with a delicate finger. For a second after Whitely's words died away there was silence in the cab as Grogan peered thoughtfully out and down at the city beneath.

"Well, Whitely," he said, finally, settling back in his seat. "What you say may be true; I would be the last person to accuse you of saying something that was not true. Indeed, I will admit we might possibly have squeezed a few more credits out of them. But that would have forced them to raise the price of Temporal Determinants beyond the reach of all but the very rich. By shrewdly lowering my own price, I maneuvered them into keeping theirs down. More sets will sell. There will be more money in circulation. They will make greater profits and consequently be able to lower their prices on other articles they manufacture. I will be able to buy equipment more cheaply."

And satisfied with himself again, Grogan gazed happily out the helicopter window and hummed Brahms' Second Symphony contentedly to himself. In the other seat, over against the far window, Whitely said nothing. But he thought of a percentage commission check for ten thousand credits made out to himself, and his eyes filled with tears.

★

THE LAST WORD

THIS DEPARTMENT is for you, our readers, and is a vehicle for airing your opinions. We shall publish as many letters in each issue as space allows, and it makes no difference whether they are complimentary, or whether the editor is lambasted for what you think was an error of judgement in selecting stories. If you want to argue with an author, or with other letter-writers, here is an open forum for you.

While the editor may comment upon a given opinion, and may express one or two of his own at times, this is your department, and you have the last word. And whether your letter is published or not, rest assured that your opinions are read carefully and taken into consideration. All suggestions for improvement are welcome, and we will follow them wherever feasible.

FOR MR. HARPER

Dear Bob:

Thanks to Mr. Harper for his kind remarks about my article "Faery Lands Forlorn." I think I can answer some of the points he raises.

As to the authorship of the Pentateuch (which should include *Joshua* and be called the Hexateuch) it can't be by Moses because it describes the death of the alleged author, in *Deuteronomy* xxxiv. Allusion to a Philistine chieftain (*Genesis* xxi) shows that *Genesis* dates after Joshua's death, as the Philistines don't show up in Hebrew history till then. References to the subjugation of the Edomites and all the Canaanites indicate a time after David (1016 B.C.). The elaborate priestly regulations of *Leviticus* were evidently inserted after the Exile (538 B.C.). The Creation-myth of *Genesis* was evidently not widely (if at all) known in Israel in the ninth and eighth centuries B.C. because the Prophets make no reference to it. When they do allude to the Creation, it's another myth they're talking about.

It has been known, ever since Jean Astruc pointed it out in 1753, that *Genesis* is made up of two separate and parallel stories spliced together in no very expert way; each self-consistent but disagreeing in many ways with the other. They can be told apart by the name used for God: *Elohim* through *Genesis* 1 and the first three and a half verses of *Genesis* ii; then *Yahveh Elohim* from there to the end of *Gen.* iii, for instance.

Elohim, by the way, means "the gods," so what *Genesis* literally says is "In the beginning *the gods* created the heaven and the

earth." The reason is that the Hebrews were still polytheists when *Genesis* was written. Later, when the priests of Yahveh got control of the Jewish state, and suppressed all their rivals, they faked the earlier records to make it appear that the Hebrews had been monotheists ever since the Creation, in much the way the Stalinists eliminated Trotsky from Russian history.

These two narratives, combined in *Genesis* (with fragments of a third) account for some of the many inconsistencies of the work; for instance, the two Flood-stories, in one of which the waters recede in the seventh month and in the other of which they do in the tenth month. (*Genesis* viii, 4,5.)

I went into Flood-legends at length in an article, "The Great Floods," in *Astounding Science Fiction* for October, 1949. The gist of it is that the Noachian Deluge is only one of half a dozen versions of this story, which is also known in Greek (Deukalion's Flood), Assyrian (Utnapishtim's Flood), Hittite, Hurrian, Babylonian (Xisouthros' Flood), and Sumerian (Ziusudra's Flood). They are all so much alike that they were obviously derived either one from the other, or from a common source. The Sumerian version goes back at least to 2000 B.C. if not farther. It is thus older, not only than the date when (the best modern scholars agree) *Genesis* reached its final form (around 500 B.C.) but even older than the date Mr. Harper gives for its writing (around

1450 B.C.).

The only logical inference is that the Sumerian version is the original, or at least the oldest preserved, version, and that the others are derived from it. It follows that the Hebrews picked it up at the most logical time and place—during their captivity in Babylonia—and incorporated it in their mythology. As for its source, there is geological and archeological evidence that there were disastrous floods from time to time in the valley of the Euphrates in the fifth and fourth millenia B.C., before the river was tamed by bleeding off its waters for irrigation. There is no such evidence for a world-wide flood.

If anybody wants to pursue the matter further, here are some references: *Encyclopaedia Britannica,* s.v. *Genesis;* Salomon Reinach: "*Orpheus*: *A History of Re-*

ligions", Chap. *vii;* Robert W. Rogers: *"Cuneiform Parallels to the Old Testament"*; A. Eustace Haydon: *"Biography of the Gods"*; Allen H. Godbey: *"The Lost Tribes a Myth"*; Jack Finegan: *"Light from the Ancient Past"*; and Isaac P. Cory: *"Cory's Ancient Fragments"*; Sir Leonard Woolley: *"Ur of the Chaldees"*.

L. SPRAGUE de CAMP

The ancients, of course, saw nothing unusual about a mighty man of God such as Moses being able to describe his own death. However, all the Bibles that I have seen titles these books as Books of Moses (about Moses) rather than Books by Moses. And it's not impossible that the olden scribes knew the difference, even if the commoners didn't.

FOR MR. de CAMP

Dear Doc:

I would like to register one occasional-reader's very hearty congratulations on your current and very excellent series of articles by de Camp on magic, myth, and related subjects. For a professed magazine of purely *science*-fiction to so present such a valuable contribution to the field of contemporary fantasy is a deed deserving of the gratitude of every serious enthusiast of imaginative literature.

We have all read (alas, far too seldom of late) stories of wizards

and demons, enchantments and mythic lands; and it is not only highly interesting but rather important as well, to learn something *true* about these not-ever-useless dead ends of man's search for knowledge both of himself and of the Universe in which he lives. To his rather difficult task of illuminating, explaining, and condensing the sometimes quite considerable bodies of learning and commentary on which his articles are based, Mr. de Camp brings a brilliant talent, a wry humor, a commendable and scientific detachment, as well as an occasionally awesome amount of erudition. I, not quite modestly, add that I have not yet caught him in an error.

In regard to subjects for his future articles in this series, may I suggest 1) Divination, the psuedo-science of foretelling the future which, over the centuries, man has attempted by means of the intestines of s l a u g h t e r e d animals, the random scattering of straws, sticks, pebbles, visions in pools of ink, blood, quicksilver, and, of course, the famous crystal ball, which as a rule is neither a true ball nor made from crystal; 2) The Fairies, perhaps the most interesting and original of all creations of the folk-mind, and a discussion of people who have seen them, caught them, killed them, photographed them, and accompanied them into Faerie; and, of course, 3) Black Magic itself, and some information on demon-worship, the Medieval *grimoires,* the witch-covens, evocations and conjurations of spirits and other inhabitants of Hell.

However, any subject on which he writes is sure to be of extreme interest to the many of us deeply interested in the pseudo-sciences, intricate and false philosophies, and elaborate but useless arts which constitute the Occult.

LIN CARTER,
New York, N. Y.

One very interesting thing about magic formulas, rituals, etc., is that they are exact prescriptions: in order to work (supposedly) every ingredient and element must be present, and in the correct order. That is, the matter of calling for non-existent ingredients aside, they seem to be as specific as a chemical formula. Trimmings exist, no doubt, just as one can make the process of dropping iodine crystals on white *phosphorous (spectacular reactions here) even more impressive by adding incantations and esoteric gestures to the business.*

Dear Editor:

So now it's psionic machines! Well, I don't mind, long as entire issues aren't devoted to the subject. An occasional yarn dealing with it is okay, all depending upon whether it's a good story in its own right, as was "The Saboteur". Garrett seems to be on his way to the top—which is fine; the more "top names" there are in science fiction, the more variety of quality stories is the way I see it. It isn't so good if the leading lights consist of a handful of

writers, whom editors have to present in a variety of pen-names in order to create the illusion that the select company is larger than it really is.

By the way, there's one thing about the Hieronymous machine that fascinates me: did you know that there was a notorious 18th Century gentleman named Karl Friedreich Hieronymous? I'm sure you'll recognize him by his title: Baron Munchausen.

JOE BASALMO,
New London, Conn.

Hmm, wonder if the resemblance is more than coincidental.

ON ARTICLES

Apparently my point was poorly made—in the letter you headed "Perspective". I think Mr. Joseph Russo—"Radical Change" came much closer to it than I did.

It is simply that the average science-fiction fan ("beanies" and all) is a "crest of the wave" person so far as the flow of human endeavour and aspiration is concerned: he is a very bright, highly imaginative and thoroughly articulate person.

And as such his appetite for the hazy ultimates of human experience most probably embraces the latest and "best" in science hypotheses available at any given time.

So give him articles on "what's new"!

Surely if he'll go along with an article on the philosopher's stone he'd read one on the discovery and significance of the antiproton!... And what—for another example—is the expected value of the proposed fifteen-billion electron-volt synchrocyclotron? I can't believe such topics are beyond the ken and interest of SF fans.

I'm sure, too, such pieces would be of interest and value—as a source of story-ideas—to your contributing authors.

W. J. FRANKLIN,
New York, N. Y.

PS. I'm not exactly of hoary age, (thirty-five). You see, my father saved the "*Amazings*"—and I read 'em all between the ages of ten and twelve.

I've never felt that a science fiction magazine should try to do something which a magazine like Scientific American *does better. If we're going to have straight scientific articles, then there ought to be angles and direct tie-ins with science fiction which you would not find elsewhere.*

COVER COMPLIMENT

Dear Mr. Lowndes:

I was attracted to the July issue by the unusually good Ed Emsh cover. I say "unusually" because the last couple of his covers have struck me as unattractive and completely without any appeal. I think that Emsh would improve even more if you would take him off the white background that you use almost every issue.

Now onward to the contents of the issue.

The best story was probably Bryce Walton's, "The Third City". Actually, the story wasn't anywhere near Walton's usual. After a careful study of Walton's style and Ted Sturgeon's I have come to the conclusion that Walton is Sturgeon or a very good imitator of him. So . . . is he Ted Sturgeon? (OK, you BNF's, you can stop laughing now.)

"Wapshot's Demon"—Pohl—would have rated second, but was spoiled for me by extremely poor writing at the beginning. Fred Pohl can do much better, don't you think?

"Art-Work"—Blish—totally disappointing to me. Found myself battling my way through every single page, especially the middle. Very stiff and hard to read.

"The Secret Weapon of Titipu"—Spencer, a welcome bit of half-satire with a good surprise ending. Think that Mr. Spencer got his idea from L. Sprague de Camp's article in the last March's issue. You readers had better read the article to find out what I am talking about.

"The Lonely One"—Silverberg; very poor Silverberg story, in fact, the poorest I have seen from him. And he doesn't write

bad stories. As soon as I read the first few pages it was obvious as to how it would end.

"The Saboteur"—Garrett— I have nothing to say.

Hey, do you think that you could possibly return, "20 Years Ago" in "Inside Stf"? Recently I bought some old issues of *Future* and I found "20 Years Ago" very interesting and informative.

Kenn Curtiss: You aren't the only one who jinxes the Science Fiction Magazines. The first prozine that I bought was *Startling Stories,* Summer 1955. It folded with the Fall number. At that time I also bought *Planet Stories;* it folded with the Summer 1955 number. Last December I sent away for a copy of Dick Geis', *Science Fiction Review;* I then learned that *it* folded. So you see, Kenn, you are not the only one with this trouble. The "'Zine Jinx" is a most unusual coincidence; could even be that Shaver's deros are causing it.

Looking forward to a far better issue.

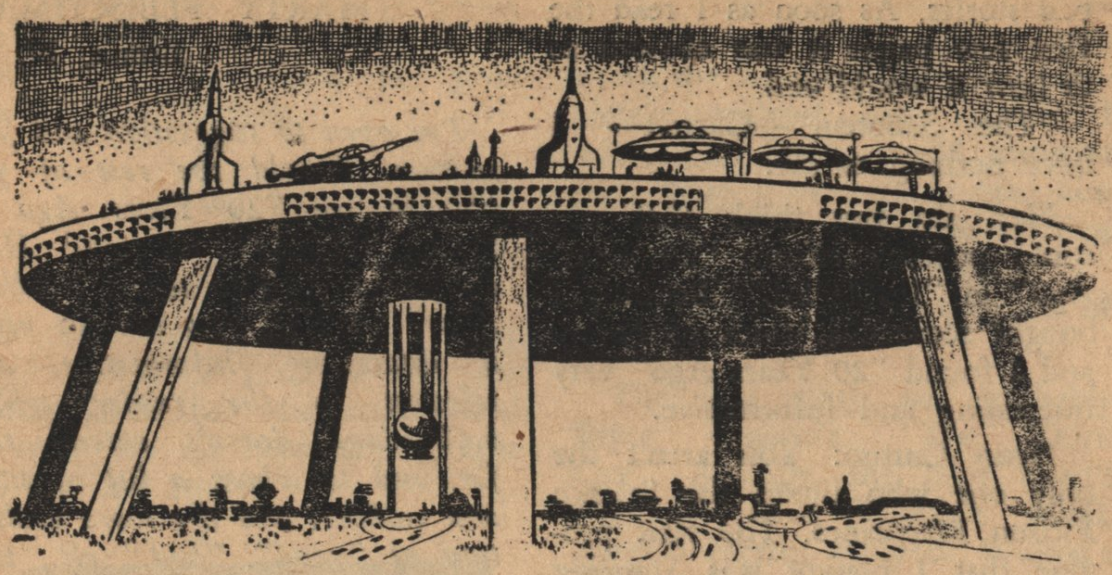
MARTY FLEISCHMAN,
Bronx, N. Y.

I'm open to suggestion and persuasion. Would the rest of you like to see "20 Years Ago in Science Fiction" restored? How would you like to see it handled, if so? That is, how can we make it interesting, informative, and relevant to the reader whose background doesn't extend that far, and to whom a list of titles and authors, and the mere evaluation of "good", "bad," etc., will be meaningless?

REVISIONISTS

Dear Editor:

We'd like to hear from any readers who share our interest in revised spelling. Ellen has developed (with help from several correspondents) a system which she calls "Representative Spelling," and we'd like to exchange letters and form a correspondence group with others interested in this field. Even tho' we admit stimu-



lating to work with—and if the idea does find general acceptance some day it will be a good thing to have a system worked out. Representative Spelling can be used on now-standard typewriters, etc., and is aimed toward the goal of "One spelling, one sound; one sound, one spelling."

"Reprizentitivli yorz,"
STAN & ELLEN CROUCH
7700 Alpine (#4),
Washington 28, D.C.

Systems of spelling reform seem to be chronic. Remember "Comes the Revolution", by Donald Franson in the March 1956 *S.F.S?*

WELL BALANCED

Dear Mr. Lowndes:

Greatly enjoyed the July issue; it was well-balanced, all around—stories for each kind of preference of the average reader.

For myself, my space adventurer's taste was satisfied by "The Saboteur" and "The Lonely One". The other stories were well-written, with a dash of fantasy.

As always, the readers' departments were interesting.

If only the Gods of Space would will the publication date to be monthly!

W. C. BRANDT,
Oakland, Calif.

DEFENDER OF THE FAN

Dear Mr. Lowndes:

On many occasions, while reading through the letter sections of a science-fiction magazine, I have chanced upon a reader or face whose opinions I violently disagree with. Such an one is Mr. Moomaw of "Futile" in your July issue.

If by any chance he should have a "Barrow-type" fan in preservative, or pinned to a board with his moth collection, I will be very pleased to see it. They say that seeing is believing. Almost every person I encounter has some interest in science-fiction, and a few are violent fanatics. None—

I repeat, *none*—have expressed to me an opinion like that which Mr. Moomaw ascribes to Mr. Barrow. Perhaps that is because they sense that I would become violent (even as Mr. Moomaw) if they did.

As a member of the "beanie" faction, I would like to state: 1) I do not own a water pistol; 2) I do not own a beanie; 3) my parents love me; 4) I have never been in a juvenile court; and 5) neither have any of my friends.

Unfortunately, I missed Mr. Barrow's first letter (I gather that there was such), but judging by his second, he seems to be a sane and reasonable man. Mr. Moomaw is exaggerating just a little.

Just to make Mrs. Dziechowski feel a little better, I present to her one female fan, although I may not count, being only fourteen years of age.

I enjoyed Mr. Harper's letter and opinions very much.

Being so very new to science fiction (four years), I will not venture to express opinions on the stories. I have vented enough spleen. As it is, Mr. Lowndes, you will probably receive many letters from irate fans, sputtering, "Bloody cheek! How dare this nasty child disagree with sane and responsible men who know what they are talking about?"

As a matter of fact—how dare I?

MARY HOLDEN,

Windsor, Ontario, Canada

There's much to be said for peserving the "beanie" type fan as described here.

FASTEST RISING

Dear Mr. Lowndes:

I have waited to read the July *Science Fiction Stories* and give myself time to think over my reaction before I wrote this letter. Well, I believe I've now had my second thoughts on the entire recent run of the magazine, and I find no reason to change my first impression:

SFS is, by all odds, the fastest rising magazine in the field, quality-wise. It is also assuming an appearance in keeping with its new stature. It is dignified without being stuffy; it can be depended on to produce one's money's worth every time; and it is really doing these things, not just acting as though it does and boosting itself with editor-written back-pats in every available piece of blank space where the advertisers (who

know the circulation figures) are not. It is, in short, a champion.

This is not to say that you have reached the top of the heap. I wish, for example, that you would use a cleaner typeface. The present one is blotchy, looks as though it had been pounded with a hammer, and takes something away from the stories by conveying the feeling of a cheaply-produced magazine. The covers are excellent and tasteful, and the arrangement of type and illustrations is attractive, but between the typeface itself and those 'By the Author of...' footnotes, one gets the feeling that the days of the Double Action trademark are not completely gone.

I am sure, however, that with a few more issues maintaining this rate of improvement, SFS will really be at the very top.

FRANK R. CONSULATO,
New York, N. Y.

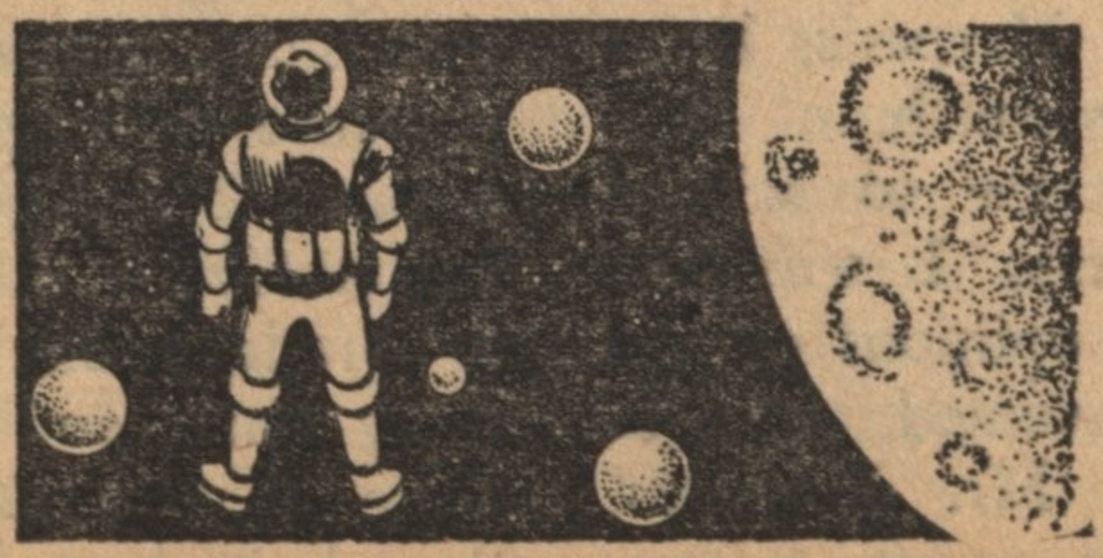
Any type-face will seem blurry when there's too much inking, and all I can do when I see a copy thus defaced is to replace it and write a letter—more in sorrow than anger—to our printers, who generally do a pretty good job. I've seen the same trouble in many magazines, with many different styles of type.

If a sizeable number of readers object, I'll drop the "by the author of" lines. They aren't vital, but I feel that they might help a bit. You see, as with the "name author" matter, we hope to attract readers who are not regulars or fans, but who have read science fiction, now and then, and might like to read some more.

Let's say, for example, that John Doe isn't a regular reader, but he's read a few stories by Isaac Asimov, and enjoyed them. Then the name "Isaac Asimov" might mean something to him on the cover. (To the regular readers, we know it means a promise of something enjoyable!) Let's say that he's read a couple by Ike, but didn't recall the name; (fantastic as that might be); he might remember a title—which is why we have "by the author of" there. And why we may list a title which did not appear in our magazines. Clear?

But if you-all feel that this cheapens the appearance of SFS, then we're willing to drop the practice.

★



Take Any 3 OF THESE SCIENCE FICTION THRILLERS

Yours for Only $1.00 WITH MEMBERSHIP

Choose From These SIX Outstanding Best-Sellers:

REPORT ON UNIDENTIFIED FLYING OBJECTS— For description, please see other side. (*Pub. ed.* $4.50)

THE ASTOUNDING SCIENCE-FICTION ANTHOLOGY. A story about the first A-Bomb . . . written before it was invented! A story of the movie machine that shows "newsreels" of *any* past event. Plus a score of other best tales from a dozen years of Astounding Science-Fiction magazine by its editor, John W. Campbell, Jr. (*Pub. ed.* $3.50)

OMNIBUS OF SCIENCE-FICTION. 43 top-stories by outstanding authors . . . stories of Wonders of Earth and Man . . . of startling inventions . . . of visitors from Outer Space . . . of Far Traveling . . . Adventures in D mension . . . Wonders of Tomorrow. 562 pages. (*Pub. ed.* $3.50)

THE TREASURY OF SCIENCE-FICTION CLASSICS. World-renowned stories that have stood the test of time—by H. G. Wells, Jules Verne, Sir Arthur Conan Doyle, Aldous Huxley, Philip Wylie, Edgar Allan Poe, E. M. Forster, F. Scott Fitzgerald, etc. 704 pages. (*Pub. ed.* $2.95)

WORLD OUT OF MIND, *by J. T. M'Intosh.* Creatures from Outer Space (disguised as humans) come to Earth to prepare for *invasion.* And one of these super-saboteurs wins the world's highest office and is finally chosen to lead the Earth's defense! (*Pub. ed.* $3.00)

SECOND FOUNDATION, *by Isaac Asimov.* The terrible psychopathic genius called "The Mule" had conquered almost the entire Galaxy. Only one civilization had escaped his evil clutches. *How could they stop this madman?* (*Pub. ed.* $2.75)

SEND NO MONEY

Just Mail Coupon

WE KNOW you will enjoy membership in this new book club. To PROVE it we are making this amazing offer. Your choice of ANY 3 of these new Science-Fiction best sellers—at ONLY $1 FOR ALL 3! Two are your gift books for joining. The other is your first selection. As a member you will be offered the "cream" of the new $2.75 to $4.00 Science-Fiction Books—for only $1. You take only those books you really want—as few as four a year. But this offer may have to be withdrawn. So mail the coupon RIGHT NOW to:

SCIENCE-FICTION BOOK CLUB
Dept. SFS-3, Garden City, N. Y.

Which 3 Do You Want for Only $1.00

SCIENCE-FICTION BOOK CLUB
Dept. SFS-3, Garden City, N. Y.

Please rush the 3 books checked below, as my gift books and first selection. Bill me only $1 for all 3 (plus few cents shipping charges), and enroll me as a member. Every month send the Club's free bulletin, "Things to Come," so that I may decide whether I wish to receive the coming selection. For each book I accept, I will pay only $1 plus shipping. I need not take a book every month (only 4 during each year I am a member) — and may resign any time after accepting 4 selections.

SPECIAL NO-RISK GUARANTEE: If not delighted, I may return all books in 7 days, pay nothing and this membership will be cancelled.

- ☐ Astounding S-F Anthology
- ☐ Omnibus of S-F
- ☐ Report on UFOs
- ☐ Second Foundation
- ☐ Treasury of S-F Classics
- ☐ World Out of Mind

Name.....(Please Print)

Address.....

City.....Zone.....State.....

Selection price in Canada $1.10 plus shipping. Address Science-Fiction Club, 105 Bond St., Toronto 2. (Offer good only in U. S. and Canada.)

At Last! Former Air Force Expert Reveals HUSHED-UP FACTS ON "FLYING SAUCERS"

Here is the first authoritative report on Unidentified Flying Objects —by the top man in charge of their official investigation!

ARE "Flying Saucers" *real?* Are they *interplanetary spaceships* manned by *intelligent beings?* THE REPORT ON UNIDENTIFIED FLYING OBJECTS discloses ALL the startling, heretofore "hushed-up" FACTS—*and you can draw your own conclusions!*

As chief of the Air Force project assigned to the investigation and analysis of "UFO's," Edward J. Ruppelt and his staff studied *over 4,500 reports*—and discussed them with everyone from out-and-out crackpots to top-level scientists and generals.

All reports were subjected to military intelligence analysis. Astronomers, physicists, aerodynamic engineers, and psychologists were consulted in the course of exhaustive investigation. The official Air Technical Intelligence Center reports of their findings, *many details of which are revealed for the first time in this book,* contain some completely baffling accounts by thoroughly reliable witnesses—*some of whom were expert scientists and military men!*

NOT fiction but thought-provoking FACT by the former head of the U. S. Air Force PROJECT BLUE BOOK investigating "Flying Saucers."

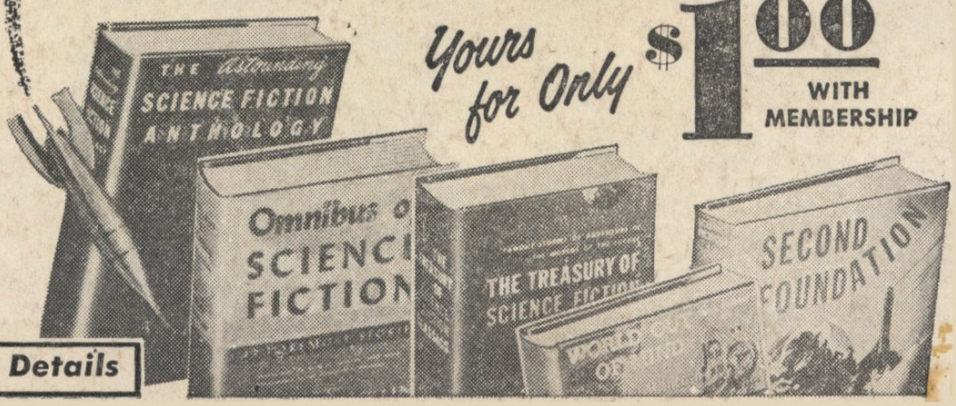
THE BOOK CLUB OF TOMORROW IS HERE TODAY!

As a member of the Science-Fiction Book Club, you can now enjoy the best new Science-Fiction novels for only $1 each (plus few cents shipping)—even though they cost $2.50 and up in publishers' editions. You need take only four books a year—yet you can still enjoy this sensational low price!

And on this special introductory offer you are invited to select any 3 of the books shown here (and described on the other side) for ONLY ONE DOLLAR. Each is a brand-new, full-length, full-sized thriller. An $8.70 to $11.50 value—yours for only $1. Read all about them—then mail the coupon (on other side) RIGHT NOW!

Any 3 OF THESE COMPLETE NEW MASTERPIECES OF SCIENCE-FICTION

Yours for Only $1.00 WITH MEMBERSHIP



See other side for Details