
Astounding
SCIENCE FICTION
MARCH 1951
25 CENTS
"SPACE FEAR,"
by James H. Schmitz

Astounding
SCIENCE FICTION
Reg. U. S. Pat. Off.

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MARCH, 1951 VOL. XLVII, NO. 1

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Astounding SCIENCE FICTION published monthly by Street & Smith Publications, Incorporated at 122 East 42nd Street, New York 17, New York. Gerald H. Smith, President; Henry W. Ralston, Vice President; Ralph R. Whittaker, Jr., Vice President; Arthur P. Lawler, Vice President and Secretary; Thomas H. Kaiser, Treasurer. Copyright, 1951, in U. S. A. and Great Britain by Street & Smith Publications, Inc. Entered as Second Class matter at the Post Office, New York, N. Y. Subscriptions $2.50 for one year and $4.50 for two years in United States and Possessions; $3.00 for one year and $5.50 for two years in Canada; $7.50 for one year and $10.00 for two years to countries in Pan American Union, Philippine Islands and Spain. Elsewhere $10.00 for one year and $14.00 for two years. When possible, allow four weeks for change of address. Give old address and new address when notifying us. We cannot accept responsibility for unsolicited manuscripts or art work. Any material submitted must include return postage.
All subscriptions should be addressed to Subscription Dept., Street & Smith Publications, Incorporated, 304 East 45th Street, New York 17, New York.
$2.50 per Year in U. S. A. Printed in  the U. S. A. 25c per Copy

NEXT ISSUE ON SALE MARCH 21, 1951

"ELEMENTARY, MY DEAR WATSON!"

The classification "rare earth elements" is applied to that group of elements near the middle of the periodic table between barium, which closely resembles familiar calcium, and the element tantalum, which resembles vanadium. These "rare" elements aren't particularly rare, as a matter of fact—but they have given chemists a rare old time trying to untangle them. Untangling the mixture of elements found in the usual minerals is perhaps comparable to untangling a snarl of mixed clothesline, red wool yarn, and blue silk thread. Untangling the "rare earths" is more like the job of disentangling a snarl formed from sixteen lengths of cellophane tape, all colored red. They're not only the same size and color, they're sticky.

The chemical properties of an element are determined primarily by the structure of the outer electron shells; in the case of such elements as helium, lithium, et cetera, in the first period, things are simple and straightforward; each element adds one more electron in the outermost shell. Helium has none, lithium one, beryllium two, boron three, carbon four, and so on. But the rare earths do it the hard way; each added electron, instead of adding in the outermost shell, where it will markedly effect things, slides down inside and adds to the crowding of the next inner shell. As a result, the added electron has very little effect on the chemical properties of the element.

And the result of that has been that whole generations of Ph.D. candidates have worked under some professor carrying out fractional crystallizations. The water solubility of ammonium didymium sulphate was slightly different from that of other rare-earth elements, and it took only a few thousand partial crystallization processings to separate it. But unfortunately, it later turned out that some ten thousand successive fractional crystallizations — labora-

tories, full of evaporating dishes stacked on shelves, benches, chairs, everywhere while the slow loss of water crystallizes out a bit of the less soluble salt – month follows month, Ph.D. candidate follows Ph.D. candidate in the vast repetitive labor of manipulating ten thousand fractional crystallizations – gradually separated the "element" didymium into praesodymium and neodymium. The one-electron difference between them happened to be deep down in the layered up electron shells.

Now the properties of an element that can be separated in this way may be extremely interesting, and highly valuable. But no great industrial use of it will be made while the extraction process involves any such fantastic, inordinately difficult piece of work. Gadolinium ore may sell at ten dollars a ton, but if it takes five years of work to separate it, gadolinium as a pure element is going to be strictly a curiosity. Highly impure cerium finds commercial use in gas mantles and cigarette lighter "flints". Lanthanum oxide, and some other rare element oxides have been used in making special optical materials.

But these substances are elements –metallic elements, generally, with properties that may have great influence on the behavior of metallic alloys containing them. Certain of their salts show high fluorescence–important to cathode ray tube and lamp manufacturers – and their medicinal effects are quite unknown. And they are not truly rare; it is more the difficulty of disentangling them than the difficulty of finding a source of supply that makes them seem rare.

When uranium fissions, the fissioned parts of the atom, the fission products, are largely rare-earth elements. And the Manhattan Project had the job of studying those products, finding out what they were chemically, and what their nuclear properties were. Furthermore, when your synthetic atom of erbium is going to disintegrate and become an atom of holumium or thullium in something like 2.6 hours–you don't perform ten thousand fractional crystallizations to separate it. Under those conditions you need a separation technique that does it *now*.

That technique was developed; the ion-exchange technique. In many respects a cousin of the standard household water-softener, the molecules of synthetic plastic materials used in the glass tube of the ion-exchanger absorb the ions of the elements in solutions dripped through in an extremely selective manner. It will, in effect, perform one million fractional crystallizations in a few seconds.

The result is that, for the first time in history, the strange elements of the middle of the table are becoming commercially available. Gradually thullium, dysprosium, terbium and lutecium may become common household names–or industrial products. In any case, all our technical history shows one thing:

The more of the elemental resources of Nature we learn to find and harness–the better we prosper.

THE EDITOR.

SPACE FEAR

BY JAMES H. SCHMITZ

Of all the weapons man can use against man, none is so powerful, so binding and paralyzing, as Fear. And in an interstellar culture, dictators who rule by fear have special problems . . .

Illustrated by Orban

I.

The three Bjanta scouts were within an hour's flight of the yellow dwarf star of Ulphi when the *Viper's* needle-shape drove into their detection range, high up but on a course that promised almost to intersect their own.

It didn't exactly come to that point, though the unwary newcomer continued to approach for several minutes more. But then, with an abruptness which implied considerable shock on board at discovering Bjanta ahead, she veered off sharply and shot away at a very respectable speed.

The scout disks swung about unhurriedly, opened out in pursuit formation and were presently closing in again, with leisurely caution, on the fugitive. Everything about that beautifully designed, blue-gleaming yacht suggested the most valuable sort of catch. Some very wealthy individual's plaything it might have been, out of one of the major centers of civilization, though adventuring now far from the beaten path of commercial spaceways. In which case, she would be very competently piloted and crewed and somewhat better armed than the average freighter. Which should make her capable of resisting their combined attack for a maximum of four or five minutes—or, if she preferred energy-devouring top velocity, of keeping ahead of them for even one or two minutes longer than that.

But no Bjanta was ever found

guilty of impulsive recklessness. And, just possibly, this yacht could also turn out to be another variation of those hellish engines of destruction which galactic humanity and its allies had been developing with ever-increasing skill during the past few thousand years, against just such marauders as they.

As it happened, that described the *Viper* exactly. A Vegan G.Z. Agent-Ship, and one of the last fifty or so of her type to be completed, she was, compared with anything else up to five times her three-hundred-foot length, the peak, the top, the absolute culmination of space-splitting sudden death. And, furthermore, she knew it.

"They're maintaining pattern and keeping up with no sign of effort," her electronic brain reported to her pilot. "Should we show them a little more speed?"

"The fifteen percent increase was plenty," the pilot returned in a pleasant soprano voice. "If they edge in, you can start weaving, but remember they're sensitive little apes! Anything fancy before we get within range of our cruiser is bound to scare them off."

There was a moment of silence. Then the ship's robot voice came into the control room again:

"Pagadan, the disk low in Sector Twelve has moved in almost to contact beaming range! You could get any two of them at any time now—and leave us the third to run down."

"I know it, little *Viper,*" the pilot gave back patiently, "but this whole job's based on the assumption that the Bjantas are operating true to form. In which case, their Mother Disk will be somewhere within three light-years behind us—and the cruiser wants to run two of these scouts back far enough to show just where it's lying. We need only one for ourselves."

Her face had turned up over her shoulder as she spoke. Except for the eyes, it was a human face, the face of a very pretty young woman. But the eyes were inhumanly large and elongated, the silver eyes and squared black pupils of a Lannai humanoid—the first nonhuman race to have become a member-nation of the far-flung Confederacy of Vega.

There was no one else on board, or required there. Agent-Ship and Agent were not so much a team as a calculated synthesis of optimal efficiency in their specialized branch of Confederacy business. And so smoothly did their function overlap that sometimes it would have been a little difficult for Pagadan to say immediately whether it was her organic brain or its various electronic extensions in the ship which was attending to some specific bit of business. Just now it was the *Viper* who was watching the communicators.

"The Agent-Trainee on the O-Ship off Ulphi is trying to talk to you, Pagadan," the robot-voice came into the room. "Will you adjust to his range?"

The Lannai's silver-nailed hand shot out and spun a tiny dial on the desk before her. From a communicator to her left a deep voice inquired, a little anxiously:

"Pag? Do you hear me? This is Hallerock. Pag?"

"Go ahead, chum!" she invited. "I was off beam for a moment there. The planet still look all right?"

"No worse than it ever did," said Hallerock. "But this is about your Fleet operation. The six destroyers are spread out behind you in interception positions by now, and the cruiser should be coming into detection dead ahead at any moment. You still want them to communicate with you through the Observation Ship here?"

"Better keep it that way," Pagadan nodded. "The Bjantas might spot Fleet signals, as close to me as they are, but it's a cinch they can't tap *this* beam! I won't slip up again. Anything from the Department?"

"Correlation is sending some new stuff out on the Ulphi business, but nothing important. At any rate, they didn't want to break into your maneuver with the Bjantas. I told them to home it here to the O-Ship. Right?"

"Right," Pagadan approved. "You'll make a Zone Agent yet, my friend! In time."

"I doubt it," Hallerock grunted. "There's no real future in it anyway. Here's the cruiser calling again, Pag! I'll be standing by—"

Pagadan pursed her lips thoughtfully as a barely audible click indi-

cated her aide had gone off communication. She'd been a full-fledged Zone Agent of the Vegan Confederacy for exactly four months now—the first member of any nonhuman race to attain that rank in the supersecretive Department of Galactic Zones. Hallerock, human, was an advanced Trainee. Just how advanced was a question she'd have to decide, and very soon.

The surface reflections vanished from her mind at the *Viper's* subvocal warning:

"Cruiser—dead ahead!"

"The disk on your left!" Pagadan snapped. "Cut it off from the others as soon as they begin to turn. Give it a *good* start then—and be sure you're crowding the last bit of speed out of it before you even think of closing in. We may not be able to get what we're after—probably won't—but Lab can use every scrap of information we collect on those babies!"

"We'll get what we're after, too," the *Viper* almost purred. And, a bare instant later:

"They've spotted the cruiser. *Now!*"

In the vision tank, the fleeing disk grew and grew. During the first few minutes, it had appeared there only as a comet-tailed spark, a dozen radiant streamers of different colors fanning out behind it—not an image of the disk itself but the tank's visual representation of any remote moving object on which the ship's detectors were held. The shifting lengths and brightness of the streamers announced at a glance to those trained to read them the object's distance, direction, comparative and absolute speeds and other matters of interest to a curious observer.

But as the *Viper* began to reduce the headstart the Bjanta had been permitted to get, at the exact rate calculated to incite it to the most intensive efforts to hold that lead, a shadowy outline of the disk's true shape began to grow about the spark. A bare quarter million miles away finally, the disk itself appeared to be moving at a visual range of two hundred yards ahead of the ship, while the spark still flickered its varied information from the center of the image.

Pagadan's hands, meanwhile, played continuously over the control desk's panels, racing the ship's recording instruments through every sequence of descriptive analysis of which they were capable.

"We're still getting nothing really new, I'm afraid," she said at last, matter-of-factly. She had never been within sight of a Bjanta before; but Vega's Department of Galactic Zones had copies of every available record ever made of them, and she had studied the records. The information was largely repetitious and not conclusive enough to have ever permitted a really decisive thrust against the marauders. Bjantas no longer constituted a major threat to civilization, but they had never stopped being a dangerous nuisance along its fringes—space-vermin of a

particularly elusive and obnoxious sort.

"They've made no attempt to change direction at all?" she inquired.

"Not since they first broke out of their escape-curve," the *Viper* replied. "Shall I close in now?"

"Might as well, I suppose." Pagadan was still gazing, almost wistfully, into the tank. The disk was tilted slightly sideways, dipping and quivering in the familiar motion-pattern of Bjanta vessels; a faint glimmer of radiation ran and vanished and ran again continuously around its yard-thick edge. The Bjantas were conservatives; the first known recordings made of them in the early centuries of the First Empire had shown space-machines of virtually the same appearance as the one now racing ahead of the *Viper*.

"The cruiser seems satisfied we check with its own line on the Mother Disk," she went on. She sighed, tapping the tank anxiously. "Well, nudge them a bit—and be ready to jump!"

The *Viper's* nudging was on the emphatic side. A greenish, transparent halo appeared instantly about the disk; a rainbow-hued one flashed into visibility just beyond it immediately after. Then the disk's dual barrier vanished again; and the disk itself veered crazily off its course, flipping over and over like a crippled bat, showing at every turn the deep, white-hot gash the *Viper's* touch had seared across its top.

It was on the fifth turn, some tourtenths of a second later, that it split halfway around its rim. Out of that yawning mouth a few score minute duplicates of itself were spewed into space and flashed away in all directions—individual Bjantas in their equivalent of a combined spacesuit and lifeboat. As they dispersed the stricken scout gaped wider; a blinding glare burst out of it; and the disk had vanished in the traditional Bjanta style of self-destruction when trapped by superior force.

Fast as the reaction had been, the *Viper's* forward surge at full acceleration following her first jabbing beam was barely slower. She stopped close enough to the explosion to feel its radiations activate her own barriers; and even before she stopped, every one of her grappling devices was fully extended and combing space about her.

Within another two seconds, therefore, each of the fleeing Bjantas was caught—and at the instant of contact, all but two had followed the scout into explosive and practically traceless suicide. Those two, however, were wrenched open by paired tractors which gripped simultaneously and twisted as they gripped—an innovation with which the *Viper* had been outfitted for this specific job.

Pagadan, taut and watching, went white and was on her feet with a shriek of inarticulate triumph.

"You *did* it, you sweetheart!" she yelped then. "First ones picked up intact in five hundred years!"

"They're not intact," the *Viper*

corrected, less excitedly. "But I have all the pieces, I think!"

"The bodies are hardly damaged," gloated Pagadan, staring into the tank. "It doesn't matter much about the shells. Just bring it all in easy now! The lovely things! Wait till Lab hears we got them."

She hovered around nervously while the flat, brown, soft-shelled—and really not badly dented—bodies of the two Bjantas were being drawn in through one of the *Viper's* locks and deposited gently in a preservative tank, where they floated against the top, their twenty-two angular legs folded up tightly against their undersides. Most of the bunched neural extensions that made them a unit with the mechanisms of their detachable space-shells had been sheared off, of course; but the *Viper had* saved everything.

"Nice work, Pag!" Hallerock's voice came from the communicator as she returned exultantly to the control room. "No chance of any life being left in those things, I suppose?"

"Not after that treatment!" Pagadan said regretfully. "But I'm really not complaining. You heard me then?"

"I did," acknowledged Hallerock. "Paralyzing sort of war whoop you've got! Want to see the recording the cruiser shot back to me on the Mother Disk? That run just went off, too, as per schedule."

"Put it on!" Pagadan said, curling herself comfortably and happily into her desk chair. "So they found Mommy, eh? Never had such fun before I started slumming around with humans. What were the destructive results?"

"They did all right. An estimated forty-five percent of the scouts right on the strike—and they figure it will be over eighty before the survivors get out of pursuit range. One of the destroyers and a couple of the cruiser's strike-ships were slightly damaged when the core blew up. Nothing serious."

The visual recording appeared on the communication screen a moment later. It was very brief, as seen from the cruiser—following its hornet-swarm of released strike-ships in on the great, flat, scaly-looking pancake bulk of the Mother Disk, while a trio of destroyers closed down on either side. As a fight, Pagadan decided critically, it was also the worst flop she'd seen in years, considering that the trapped quarry was actually a layered composite of several thousand well-armed scouts! For a brief instant, the barriers of every charging Vegan ship blazed a warning white; then the screen filled momentarily with a rainbow-hued sparkle of scouts scattering under the lethal fire of the attackers—and the brighter flashing of those that failed.

As both darkened out and the hunters swirled off in pursuit of the fugitive swarms, an ellipsoid crystalline core, several hundred yards in diameter, appeared where the Disk had lain space. The Bjanta breeding center—

It seemed to expand slightly.

An instant later, it was a miniature nova.

Pagadan blinked and nodded approvingly as the screen went blank.

"Tidy habit! Saves us a lot of trouble. But *we* made the only real haul of the day, *Viper,* old girl!" She grimaced. "So now we've still got to worry about that sleep-walking silly little planet of Ulphi, and the one guy on it who isn't . . . isn't sleep-walking, anyway. And a couple of other—" She straightened up suddenly. "Who's that working your communicators now?"

"That's the robot-tracker you put on the Department of Cultures investigator on Ulphi," the *Viper* informed her. "He wants to come in to tell you the lady's got herself into some kind of jam with the population down there. Shall I switch him to the O-ship and have the Agent-Trainee check and take over, if necessary?"

"Hold it!" Pagadan's hands flew out towards the section of instrument panel controlling the communicators. "Not if it's the D. C. girl! That would mess up all my plans. The tracker's ready and equipped to see nothing happens to her before I get there. Just put that line through to me, fast!"

Some while later, she summoned Hallerock to the O-Ship's communicator.

". . . So I'm picking you up in a few minutes and taking you on board the *Viper.* Central Lab wants a set of structural recordings of these pickled Bjantas right away—and you'll have to do it, because I won't have the time."

"What's happened?" her aide inquired, startled.

"Nothing very serious," Pagadan said soothingly. "But it's likely to keep me busy for the next few hours. Our D. C. investigator on Ulphi may have got an accidental whiff of what's rancid on the planet—anyway, somebody's trying to get her under mental control right now! I've got her covered by a tracker, of course, so she's in no real danger; but I'll take the *Viper's* skiff and go on down as soon as I get you on board. By the way, how soon can you have the hospital ship prepared for its job?"

Hallerock hesitated a moment. "I suppose it's ready to start any time. I finished treating the last of the personnel four hours ago."

"Good boy," Pagadan applauded. "I've got something in mind—not sure yet whether it will work. But that attack on the D. C. might make it possible for us to wind up the whole Ulphi operation inside the next twenty-four hours!"

It had started out, three weeks before, looking like such a nice little mission. Since it was her fifth assignment in four months, and since there had been nothing even remotely nice about any of the others, Pagadan could appreciate that.

Nothing much to do for about three or four weeks now, she'd thought gratefully as she hauled out

her skiff for a brief first survey of the planet of Ulphi. She had landed as an ostensible passenger on a Vegan destroyer, the skiff tucked away in one of the destroyer's gun locks, while the *Viper* went on orbit at a safe distance overhead. That gleaming deep-space machine looked a trifle too impressive to be a suitable vehicle for Pelial, the minor official of Galactic Zones, which was Pagadan's local alias. And as Ulphi's entire population was planet-bound by congenital space-fear, the skiff would provide any required amount of transportation, while serving principally as living quarters and a work-office.

But there would be really nothing to do. Except, of course, to keep a casual eye on the safety of the other Vegans newly arrived on the planet and co-operate with the Fleet in its unhurried preparations to receive the Bjantas, who were due to appear in about a month for the ninth of their series of raids on Ulphi. Those obliging creatures conducted their operations in cycles of such unvarying regularity that it was a pleasure to go to work on them, once you'd detected their traces and could muster superior force to intercept their next return.

On Ulphi Bjantas had been reaping their harvest of life and what they could use of civilization's treasures and tools at periods which lay just a fraction over three standard years apart. It had done no very significant damage as yet, since it had taken eight such raids to frighten the population into revealing its plight by applying for membership in the far-off Confederacy of Vega and the protection that would bring them. The same cosmic clockwork which first set the great Disk on this course would be returning it now, predictably, to the trap Vega had prepared.

Nothing for Pagadan to worry about. Nobody, actually, seemed to have much confidence that the new shell-cracker beams installed on the *Viper* to pick up a couple of Bjantas in an unexploded condition would work as they should, but that problem was Lab's and not hers. And, feeling no doubt that she'd earned a little vacation, they were presenting her meanwhile with these next three weeks on Ulphi. The reports of the officials of other Confederacy government branches who had preceded Pagadan here had described it as a uniquely charming little backwater world of humanity, cut off by the development of planetary space-fear from the major streams of civilization for nearly four hundred years. Left to itself in its amiable climate, Ulphi had flowered gradually into a state of quaint and leisurely prettiness.

So went the reports!

Jauntily, then, Pagadan set forth in her skiff to make an aerial survey of this miniature jewel of civilization and pick out a few of the very best spots for some solid, drowsy loafing.

Two days later, her silver hair curled flat to her skull with outraged shock, she came back on board the *Viper*. The activated telepath trans-

mitter hummed with the ship's full power, as it hurled her wrathful message to G. Z. Headquarters Central on the planet of Jeltad—in Vega's system, eight thousand light-years away.

At Central on Jeltad, a headquarters clerk, on his way out to lunch, paused presently behind the desk of another. His manner was nervous.

"What's the Pyramid Effect?" he inquired.

"You ought to know," his friend replied. "If you don't, go punch it from Restricted Psych-Library under that heading. I've got a final mission report coming through." He glanced around. "How come the sudden urge for knowledge, Linky?"

Linky jerked a thumb back towards his desk transmitter. "I got that new Lannai Z. A. on just before the end of my stretch. She was blowing her silver top about things in general—had me lining up interviews with everybody from Snoops to the Old Man for her! The Pyramid Effect seems to be part of it."

The other clerk snickered. "She's just diving into a mission then. I had her on a few times while she was in Zonal Training. She'll swear like a Terran till she hits her stride. After that, the rougher things get the sweeter she grows. You want to wait a little? If I get this beam through, I'll turn it over to a recorder and join you for lunch."

"All right." Linky hesitated a moment and then drifted back towards his desk. At a point well outside the vision range of its transmitter screen, he stopped and listened.

". . . Well, *why* didn't anybody know?" Pagadan's voice came, muted but crackling. "That Department of Cultures investigator has been on Ulphi for over a month now, and others just as long! You get copies of their reports, don't you? You couldn't put any two of them together without seeing that another Telep-Two thinks he's invented the Pyramid Effect out here—there isn't a thing on the crummy little planet that doesn't show it! And I'll be the daughter of a C-Class human," she added bitterly, "if it isn't a type-case in full flower, with all the trimmings! Including immortalization and the Siva Psychosis. No, I do *not* want Lab to home any of their findings out to me! Tell them I'm staying right here on telepath till they've sorted out what I gave them. Where's Snoops, that evil little man? Or can somebody locate that fuddle-headed, skinny, blond clerk I had on a few minutes—"

Linky tiptoed gently back out of hearing.

"She's talking to Correlation now," he reported to his friend. "Not at the sweetness stage yet. I think I'll put in a little time checking the Library at that."

The other clerk nodded without looking up. "You could use the Head's information cabinet. He just went out."

"Pyramid Effect," Psych-Library Information instructed Linky gently

a minute later. "Restricted, Galactic Zones. Result of the use of an expanding series of psychimpulse-multipliers, organic, or otherwise, by Telepaths of the Orders Two to Four, for the transference of directional patterns, compulsions, illusions, et cetera, to large numbers of subjects.

"The significant feature of the Pyramid Effect is its elimination of excessive drain on the directing mentality, achieved by utilizing the neural or neural-type energies of the multipliers themselves in transferring the directed impulses from one stage to the next.

"Techniques required to establish the first and second stages of multipliers are classified as Undesirable General Knowledge. Though not infrequently developed independently by Telepaths above the primary level, their employment in any form is prohibited throughout the Confederacy of Vega and variously discouraged by responsible governments elsewhere.

"Establishment of the third stage, and subsequent stages, of impulse-multipliers involves a technique-variant rarely developed by uninstructed Telepaths below the Order of Five. It is classified, under all circumstances, as Prohibited General Knowledge and is subject to deletion under the regulations pertaining to that classification.

"Methodology of the Pyramid Effect may be obtained in detail under the heading 'Techniques: Pyramid Effect'—"

The gentle voice subsided.

"Hm-m-m!" said Linky. He glanced about but there was nobody else in immediate range of the information cabinet. He tapped out "Techniques: Pyramid Effect," and punched.

"The information applied for," another voice stated tonelessly, "is restricted to Zone Agent levels and above. Your identification?"

Linky scowled, punched "Cancellation" quickly, murmured "Nuts!" and tapped another set of keys.

"Psychimpulse-multiplier," the gentle voice came back. "Restricted, Galactic Zones. Any person, organic entity, energy form, or mentalized instrument employed in distributing the various types of telepathic impulses to subjects beyond the scope of the directing mentality in range or number— Refer to 'Pyramid Effect'—"

That seemed to be that. What else was the Z. A. crying about? Oh, yes!

"Siva Psychosis," the gentle voice resumed obligingly. "Symptom of the intermediate to concluding stages of the Autocrat Circuit in human-type mentalities— Refer to 'Multiple Murder: Causes'—"

Linky grimaced.

"Got what you wanted?" The other clerk was standing behind him.

Linky got up. "No," he said. "Let's go anyhow. Your Final Mission come through?"

His friend shook his head.

"The guy got it. Ship and all. The automatic death signals just started

coming in. That *bong-bong . . . bong-bong* stuff always gets on my nerves!" He motioned Linky into an elevator ahead of him. "They ought to work out a different sort of signal."

"Understand you've been having some trouble with Department of Cultures personnel," Snoops told the transmitter genially.

"Just one of them," Pagadan replied, regarding him with disfavor. Probably, he wasn't really evil but he certainly looked it—aged in evil, and wizened with it. Also, he had been, just now, very hard to find. "That particular one," she added, "is worse than any dozen others I've run into, so far!"

"DC-CFI 1227, eh?" Snoops nodded. "Don't have to make up a dossier for you on her. Got it all ready."

"We've had trouble with her before, then?"

"Oh, sure! Lots of times. System Chief Jasse—beautiful big thing, isn't she?" Snoops chuckled. "I've got any number of three-dimensionals of her."

"You would have," said Pagadan sourly. "For a flagpole, she's not so bad looking, at that. Must be eight feet if she's an inch!"

"Eight foot two," Snoops corrected. "What's she up to now, that place you're at—Ulphi?"

"Minding other people's business like any D. C. Mostly mine, though she doesn't know that. I'm objecting particularly to her practice of pestering the Fleet for information they either don't have or aren't allowed to give for reasons of plain standard operational security. There's a destroyer commander stationed here who says every time she looks at him now, he gets a feeling he'd better watch his step or he'll get turned over and whacked."

"She wouldn't do that," Snoops said earnestly. "She's a good girl, that Jasse. Terribly conscientious, that's all. You want that dossier homed out to you or right now, vocally?"

"Both. Right now I want mostly background stuff, so I'll know how to work her. I'd psycho it out of her myself, but she's using a pretty good mind shield and I can't spend too much mission-time on the Department of Cultures."

Snoops nodded, cleared his throat, rolled his eyes up reflectively, closed them and began!

"Age twenty-five, or near enough to make no difference. Type A-Class Human, unknown racial variant. Citizen of the Confederacy; home-planet Jeltad. Birthplace unknown—parentage ditto; presumably spacer stock."

"Details on that!" interrupted Pagadan.

He'd intended to, Snoops said, looking patient.

Subject, at about the age of three, had been picked up in space, literally, and in a rather improbable section—high in the northern latitudes where the suns thinned out into the

figurative Rim. A Vegan scout, pausing to inspect an area littered with the battle-torn wreckage of four ships, found her drifting about there unconscious and half-alive, in a spacesuit designed for a very tall adult—the kind of adult she eventually became.

Investigation indicated she was the only survivor of what must have been an almost insanely savage and probably very brief engagement. There was some messy evidence that one of the ships had been crewed by either five or six of her kind. The other three had been manned by Lartessians, a branch of human space marauders with whom Vega's patrol forces were more familiar than they particularly wanted to be.

So was Pagadan. "They fight just like that, the crazy apes! And they're no slouches—our little pet's people must be a rugged lot to break even with them at three-to-one odds. But we've got no record at all of that breed?"

"He'd checked pretty closely but without results," Snoops shrugged. "And so, naturally enough, had Jasse herself later on. She'd grown up in the family of the scout's second pilot. They were earnest Traditionalists, so it wasn't surprising that at sixteen she entered the Traditionalist College on Jeltad. She was a brilliant student and a spectacular athlete—twice a winner in Vega's Sytsem Games."

"Doing what?" inquired Pagadan curiously.

Javelin, and one of those swim-

ming events; Snoops wasn't sure just which— She still attended the College intermittently; but at nineteen she'd started to work as a field investigator for the Department of Cultures. Which wasn't surprising either, since Cultures was practically the political extension of the powerful Traditionalist Creed—

They had made her a System Chief only three years later.

"About that time," Snoops concluded, "was when we started having trouble with Jasse. She's smart enough to suspect that whatever Galactic Zones is doing doesn't jibe entirely with our official purpose in life." He looked mildly amused. "Seems to think we might be some kind of secret police—you know how Traditionalists feel about anything like *that!*"

Pagadan nodded. "Everything open and aboveboard. They mean well, bless them!"

She went silent then, reflecting; while the alien black-and-silver eyes continued to look at Snoops, or through him possibly, at something else.

He heard himself saying uneasily, "You're not going to do her any harm, Zone Agent?"

"Now why should I be doing System Chief Jasse any harm?" Pagadan inquired, much too innocently. "A good girl, like you say. And so lovely looking, too—in spite of that eight-foot altitude."

"Eight foot two," Snoops corrected mechanically. He didn't feel at all reassured.

II.

The assistant to the Chief of G. Z. Office of Correlation entered the room to which his superior had summoned him and found the general gazing pensively upon a freshly assembled illumined case-chart.

The assistant glanced at the chart number and shrugged sympathetically.

"I understand she wants to speak to you personally," he remarked. "Is it as bad as she indicates?"

"Colonel Deibos," the general said, without turning his head, "I'm glad you're here. Yes, it's just about as bad!" He nodded at the upper right region of the chart where a massed group of symbols flickered uncertainly. "That's the bulk of the information we got from the Zone Agent concerning the planet of Ulphi just now. Most of the rest of it has been available to this office for weeks."

Both men studied the chart silently for a moment.

"It's a mess, certainly!" the colonel admitted then. "But I'm sure the Agent understands that when an emergency is not indicated in advance all incoming information is necessarily handled here in a routine manner, which frequently involves a considerable time-lag in correlation."

"No doubt she does," agreed the general. "However, we kept running into her socially when she's around the System, my wife and I. Particularly my wife. You understand that I should like our summa-

tion of this case to be as nearly perfect as we can make it?"

"I understand, sir."

"I'm going to read it," the general sighed. "I want you to check me closely. If you're doubtful on any point of interpretation at all, kindly interrupt me at once."

They bent over the chart together.

"The over-all pattern on Ulphi," the general stated, "is obviously that produced by an immortalized A-Class human intellect, Sub-Class Twelve, variant Telep-Two—as developed in planetary or small-system isolation, over a period of between three and five centuries."

He'd lapsed promptly, Colonel Deibos noted with a trace of amusement, into a lecturer's tone and style. Being one of the two men primarily responsible for devising the psychomathematics of correlation and making it understandable to others, the general had found plenty of opportunity to acquire such mannerisms.

"In that time," he went on, "the system of general controls has, of course, become almost completely automatic. There is, however, continuing and fairly intensive activity on the part of the directing mentality. Development of the Siva Psychosis is at a phase typical for the elapsed period—concealed and formalized killings cloaked in sacrificial symbolism. Quantitatively, they have not begun as yet to affect the population level. The open and indiscriminate slaughter preceding the sudden final decline presumably would not appear, then, for at least another century.

"Of primary significance for the identification of the controlling mentality is this central grouping of formulae. Within the historical period which must have seen the early stages of the mentality's dominance, the science of Ulphi—then practically at Galactic par—was channeled for thirty-eight years into a research connected with the various problems of personal organic immortality. Obviously, under such conditions, only the wildest sort of bad luck could prevent discovery and co-ordination of the three basic requirements for any of the forms of individual perpetuation presently developed.

"We note, however, that within the next two years the investigation became completely discredited, was dropped and has not been resumed since.

"The critical date, finally, corresponds roughly to the announced death of the planet's outstanding psychic leader of the time—an historical figure even on present-day Ulphi, known as Moyuscane the Immortal Illusionist.

"Corroborative evidence—"

The reading took some fifteen minutes in all.

"Well, that's it, I think," the general remarked at last. "How the old explorers used to wonder at the frequency with which such little lost side-branches of civilization appeared to have simply and suddenly ceased to exist!"

He became aware of the colonel's sidelong glance.

"You agree with my interpretations, colonel?"

"Entirely, sir."

The general hesitated. "The population on Ulphi hasn't been too badly debased as yet," he pointed out. "Various reports indicate an I. Q. average of around eleven points below A-Class—not too bad, considering the early elimination of the strains least acceptable to the controlling mentality and the stultifying effect of life-long general compulsions on the others.

"They're still eligible for limited membership—capable of self-government and, with help, of self-defense. It will be almost a century, of course, before they grow back to a point where they can be of any real use to us. Meanwhile, the location of the planet itself presents certain strategic advantages—"

He paused again. "I'm afraid, colonel," he admitted, "that I'm evading the issue! The fact remains that a case of this kind simply does not permit of solution by this office. The identification of Moyuscane the Immortal as the controlling mentality is safe enough, of course. Beyond that we cannot take the responsibility for anything but the most general kind of recommendation. But now, colonel—since I'm an old man, a cowardly old man who really hates an argument—I'm going on vacation for the next hour or so.

"Would you kindly confront the Zone Agent with our findings? I understand she is still waiting on telepath for them."

Zone Agent Pagadan, however, received the information with a degree of good nature which Colonel Deibos found almost disquieting.

"Well, if you can't, you can't," she shrugged. "I rather expected it. The difficulty is to identify our Telep-Two physically without arousing his suspicions? And the danger is that no one knows how to block things like a planet-wide wave of suicidal impulses, if he happens to realize that's a good method of self-defense?"

"That's about it," acknowledged the colonel. "It's very easy to startle mentalities of his class into some unpredictable aggressive reaction. That makes it a simple matter to flush them into sight, which helps to keep them from becoming more than a temporary nuisance, except in such unsophisticated surroundings as on Ulphi. But in the situation that exists there—when the mentality has established itself and set up a widespread system of controls—it does demand the most cautious handling on the part of an operator. This particular case is now further aggravated by the various psychotic disturbances of immortalization."

Pagadan nodded. "You're suggesting, I suppose, that the whole affair should be turned over to Interstellar Crime for space-scooping or some careful sort of long-range detection like that?"

"It's the method most generally

adopted," the colonel said. "Very slow, of course—I recall a somewhat similar case which took thirty-two years to solve. But once the directing mentality has been physically identified without becoming aware of the fact, it can be destroyed safely enough."

"I can't quite believe in the necessity of leaving Moyuscane in control of that sad little planet of his for another thirty-two years, or anything like it," the Lannai said slowly. "I imagine he'll be willing to put up with our presence until the Bjanta raids have been deflected?"

"That seems to be correct. If you decide to dig him out yourself, you have about eight weeks to do it. If the Bjantas haven't returned to Ulphi by then, he'll understand that they've either quit coming of their own accord, as they sometimes do—or that they've been chased off secretly. And he could hardly help hitting on the reason for that! In either case, the Senate of Ulphi will simply withdraw its application for membership in the Confederacy. It's no secret that we're too completely tied up in treaties of nonintervention to do anything but pull our officials out again, if that's what they want."

"The old boy has it all figured out, hasn't he?" Pagadan paused. "Well—we'll see. Incidentally, I notice your summation incorporated Lab's report on the space-fear compulsion Moyuscane's clamped on Ulphi. Do you have that with you in detail—Lab's report, I mean? I'd like to hear it."

"It's here, yes—" A muted alto voice addressed Pagadan a moment later:

"In fourteen percent of the neuroplates submitted with the Agent's report, space-fear traces were found to extend into the subanalytical levels normally involved in this psychosis. In all others, the symptoms of the psychosis were readily identifiable as an artificially induced compulsion.

"Such a compulsion would maintain itself under reality-stresses to the point required to initiate space-fear death in the organism but would yield normally to standard treatment."

"Good enough," Pagadan nodded. "Fourteen percent space-fear susceptibility is about normal for that type of planetary population, isn't it? But what about Moyuscane himself? Is there anything to show, anywhere, that he suffered from the genuine brand of the psychosis—that he is one of that fourteen percent?"

"Well—yes, there is!" Colonel Deibos looked a little startled. "That wasn't mentioned, was it? Actually, it shows up quite clearly in the historical note that none of his reported illusion performances had any but planetary backgrounds, and usually interior ones, at that. It's an exceptional Illusionist, you know, who won't play around with deep-space effects in every conceivable variation. But Moyuscane never touched them—"

"Telepath is now cleared for Zone Agent 131.71," the Third Co-ordinator of the Vegan Confederacy

murmured into the transmitter before him.

Alone in his office as usual, he settled back into his chair to relax for the few seconds the visualization tank would require to pick up and re-structure Zone Agent Pagadan's personal beam for him.

The office of the Chief of Galactic Zones was as spacious as the control room of a first-line battleship, and quite as compactly equipped with strange and wonderful gadgetry. As the master cell of one of the half dozen or so directing nerve-centers of Confederacy government, it needed it all. The Third Co-ordinator was one of Jeltad's busier citizens, and it was generally understood that no one intruded on his time except for some extremely good and sufficient reason.

However, he was undisturbed by the reflection that there was no obvious reason of any kind for Zone Agent Pagadan's request for an interview. The Lannai was one of the Third Co-ordinator's unofficial group of special Agents, his trouble-shooters de luxe, whom he could and regularly did unleash in the pits of space against virtually any kind of opponent—with a reasonable expectation of being informed presently of the Agent's survival and success. And whenever one of that fast-moving pack demanded his attention, he took it for granted they had a reason and that it was valid enough. Frequently, though not always, they would let him know then what it was.

The transmitter's visualization tank cleared suddenly from a smokily glowing green into a three-dimensional view of the *Viper's* control room; and the Co-ordinator gazed with approval on the silver-eyed, spacesuited, slender figure beyond the ship's massive control desk. Human or not, Pagadan was nice to look at.

"And what do you want now?" he inquired.

"Agent-Trainee Hallerock," the Lannai informed him, "6972.41, fourth year."

"Hm-m-m. Yes, I know *him!*" The Co-ordinator tapped the side of his long jaw reflectively. "Rather striking chap, isn't he?"

"He's beautiful!" Pagadan agreed enthusiastically. "How soon can you get him out here?"

"Even by Ranger," the Co-ordinator said doubtfully, "it would be ten days. There's an Agent in the nearest cluster I could route out to you in just under four."

She shook her head. "Hallerock's the boy—gloomy Hallerock. I met him a few months ago, back on Jeltad," she added, as if that made it clear. "What are his present estimated chances for graduation?"

The inquiry was strictly counter-regulation, but the Co-ordinator did not raise an eyebrow. He nudged a switch on his desk.

"I'll let the psych-tester answer that."

"If the Agent-Trainee were admitted for graduation," a deep mechanical voice came immediately from the wall to his left, "the percentage of probability of his passing

all formal tests would be ninety-eight seven. But because of a background-conditioned lack of emotional adjustment to Vegan civilization, graduation has been indefinitely postponed."

"What I thought," Pagadan nodded. "Well, just shoot him out to me then—by Ranger, please!—and I'll do him some good. That's all, and thanks a lot for the interview!"

"It was a pleasure," said the Co-ordinator. Then, seeing her hand move towards her transmitter switch, he added hastily, "I understand you've run into a secondary mission problem out there, and that Correlation foresees difficulties in finding a satisfactory solution."

The Lannai paused, her hand on the switch. She looked a little surprised. "That Ulphian illusionist? Shouldn't be too much trouble. If you're in a hurry for results though, please get behind Lab Supply on the stuff I requisitioned just now—the Hospital ship, the Kynoleen and the special types of medics I need. Push out that, and Hallerock, to me and you'll have my final mission report in three weeks, more or less."

She waved a cheerful farewell and switched off, and the view of the *Viper's* control room vanished from the transmitter.

The Co-ordinator chewed his upper lip thoughtfully.

"Psych-tester," he said then, "just what is the little hellcat cooking up now?"

"I must remind you," the psych-tester's voice returned, "that Zone Agent 131.71 is one of the thirty-two individuals who have been able to discern my primary purpose here, and who have established temporary blocks against my investigations. She is, furthermore, the first to have established a block so nearly complete that I can offer no significant answer to your question. With that understood, do you wish an estimate?"

"No!" grunted the Co-ordinator. "I'd forgotten. I can make a few wild guesses myself." He ran his hand gently through his graying hair. "Let's see—this Hallerock's trouble is a background-conditioned lack of adjustment to our type of civilization, you say?"

"He comes," the psych-tester reminded him, "of the highly clannish and emotionally planet-bound strain of Mark Wieri VI."

The Co-ordinator nodded. "I remember now. Twenty-two thousand light-years out. They've been isolated there almost since the First Stellar Migrations — were rediscovered only a dozen years or so ago. Extra good people! But Hallerock was the only one of them we could talk into going to work for us."

"He appears to be unique among them in being galactic-minded in the Vegan sense," the psych-tester agreed. "Subconsciously, however, he remains so strongly drawn to his own kind that a satisfactory adjustment to permanent separation from them has not been achieved. Outwardly, the fact is expressed only in

a lack of confidence in himself and in those with whom he happens to be engaged in any significant work; but the tendency is so pronounced that it has been considered unsafe to release him for Zonal duty."

"Ninety-eight point seven!" the Co-ordinator said. He swore mildly. "That means he's way the best of the current batch—and I could use a couple like that so beautifully right now! Psychoing won't do it?"

"Nothing short of complete mind-control for a period of several weeks."

The Co-ordinator shook his head. "It would settle his personal difficulties, but he'd be spoiled for us." He considered again, briefly, sighed and decided: "Pagadan's claimed him, anyway. She may wreck him completely; but she knows her therapy at that. Better let her give it a try."

He added, as if in apology:

"I'm sure that if we could consult Trainee Hallerock on the question, he'd agree with us—"

He was reaching out to punch down a desk stud with the last words and continued without a noticeable break:

"Central Communicator clear for Lab report on the rate of spread of the Olleeka plagues—"

His mind clearing also with that of any other matter, he settled back quietly and waited for Lab to come in.

System Chief Jasse, D. C. Cultural Field Investigator, listened attentively till her study recorder had clicked out "Report Dispatched." Then she sat frowning at the gadget for a moment.

The home office would like that report! A brisk, competent review of a hitherto obscure section of Ulphi's long-past rough and ready colonial period, pointing out and explaining the contrast between those days and the present quaintly perfect Ulphian civilization. It was strictly in line with the Department of Cultures' view of what any group of A-Class human beings, left to themselves, could achieve and it had sounded plausible enough when she played it back. But somehow it left her dissatisfied. Somehow Ulphi itself left her dissatisfied.

Perhaps she just needed a vacation! As usual, when a new case was keeping her busy, she had been dosing herself with insomniates for the past two weeks. But in her six years of work with Cultures she had never felt the need for a vacation before.

Patting back a yawn in the process of formation, Jasse shook her head, shut off the recorder and stepped out before the study mirror. Almost time for another appointment—some more historical research.

Turning once slowly before the tall mirror, she checked the details of her uniform and its accessories—the Traditionalist Greens which had been taken over with all their symbolic implications by the Department of Cultures. Everything in order, including the concealed gravmoc batteries in belt and boots and the elec-

tronic mind-shield switch in her wrist bracelet. No weapons to check; as a matter of policy they weren't carried by D. C. officials.

She pulled a bejeweled cap down on her shoulder-length wave of glossy black hair, grimaced at the face that, at twenty-five or thereabouts, still wore an habitual expression of intent, childish seriousness, and left the study.

By the lake shore, fifty feet from the D. C. mobile-unit's door, the little-people were waiting. Six of them today—middle-aged historians in the long silver-gray garments of their guild, standing beside a beautifully shaped vehicle with a suggestion of breath-taking speed about its lines. The suggestion didn't fool Jasse, who knew by experience that its looks were the only breath-taking thing about an Ulphian flow-car. The best it would produce in action was an air-borne amble, at so leisurely a pace that throughout her first trip in one of the things she had felt like getting out and pushing.

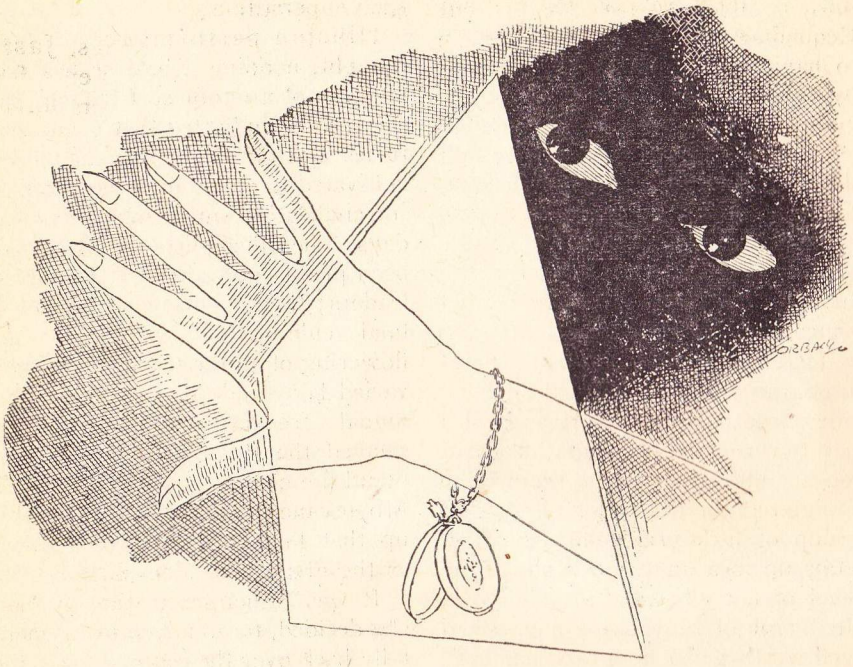
One mustn't, of course, she reminded herself conscientiously, settling back in the flow-car, judge any human culture by the achievements of another! Granted that Ulphi had long since lost the driving power of Vega's humming technologies, who was to say that it hadn't found a better thing in its place?

A fair enough question, but Jasse doubtfully continued to weigh the answer while the lengthy little Ulphian ritual of greetings and expressions of mutual esteem ran its course and came to an end in the flow-car. Then her escort of historical specialists settled down to shop talk in their flowery derivative of one of the twelve basic human dialects, and she began automatically to contribute her visiting dignitary's share to the conversation—just enough to show she was deeply interested but no more. Her attention, however, remained on the city below.

They were gliding only five hundred feet above the lake's shoreline, but all roofs were low enough to permit a wide view—and everything, everywhere, was in superbly perfect symmetry and balance. The car's motion did not change that impression. As it drove on, the gleaming white and softly tinted buildings about and below it flowed steadily into new and always immaculate patterns of sweeping line and blended color, merging in and out of the lake front with a rightness that trembled and stopped at the exact point of becoming too much so.

And that was only a direct visual expression of the essence of Ulphi's culture. Every social aspect of the planet showed the same easy order, the same minute perfectionist precision of graceful living—achieved without apparent effort in cycle on cycle of detail.

Jasse smiled pleasantly at her companions. The puzzling fact remained that this planetary batch of little-people just wasn't particularly bright! And any population with the gumption of a flock of rabbits should



have sent a marauding Mother Disk of Bjantas on its way in a panicky hurry, without having to ask for help to solve *that* sort of problem!

She really must need a vacation, Jasse sighed, disturbed by such unorthodox reflections. A-Class humans just didn't go off on the wrong track, however gracefully, unless they were pushed there – so her doubts about Ulphi meant simply that she hadn't found the key to it yet!

Possibly she could do with a few weeks of re-indoctrination in basic Traditionalism.

"The Tomb of Moyuscane the Immortal—the last of our Great Illusionists!"

Jasse regarded the tomb with an air of respectful appreciation. Tombs, on the whole, she could do without; but this one undoubtedly was something special. She and Requada-Attan, Historian and Hereditary Custodian of the Tomb, had come together out of one of the main halls of the enormous building complex which housed the Historical Institute of Ulphi's Central City into a small, transparently over-roofed park. The remainder of her escort had shown her what they had to show and then withdrawn respect-

fully to their various duties; but Requada-Attan, probably not averse to having a wider audience benefit by the informative lecture he was giving the distinguished visitor, had left the gate to the park open behind them. A small crowd of sightseeing Ulphians had drifted in and was grouped about them by now.

"A fitting resting place for the Immortal One!" Jasse commented piously.

That brought a murmur of general appreciation from the local citizens. She suspected wryly that she, with her towering height and functional Vegan uniform, was the real center of interest in this colorfully robed group of little-people—few of them came up to a point much above the level of her elbows. But otherwise, the Tomb of Moyuscane must seem well worth a visit to a people as culturally self-centered as the Ulphians. Set against the rather conventional background of a green grove and whispering fountains, it was a translucently white moment, combining stateliness and exquisite grace with the early sweeping style which the last four centuries had preserved and expanded over the planet.

"The common people have many interesting superstitions about the Tomb," Requada-Attan confided loudly. "They say that Moyuscane's illusions are still to be seen within this park occasionally. Especially at night."

His round, pink face smiled wisely up at her. It was obvious that he, a historical scientist, did not share such superstitions.

Illusion performances, Jasse thought, nodding. She'd seen a few of those of a minor sort herself, but the records indicated that some centuries ago on Ulphi they had been cultivated to an extent which no major civilization would tolerate nowadays. The Illusionists of Ulphi had been priest-entertainers and political leaders; their mental symphonies—a final culmination and monstrous flowering of all the tribal dances and varied body-and-mind shaking communal frenzies of history – had swayed the thinking and the emotional life of the planetary race. And Moyuscane the Immortal had wound up that line of psychic near-rulers as the greatest of them all.

It was rather fascinating at that, she decided, to go adventuring mentally back over the centuries into the realm of a human power which, without word or gesture, could sweep up and blend the emotions of thousands of other human beings into a single mighty current that flowed and ebbed and thundered at the impulses of one will through the channels its imagination projected.

Fascinating—but a little disturbing, too!

"I think—" she began, and stopped.

Words and phrases which had been no previous part of her thoughts suddenly were floating up in her mind—and now, quite without her volition, she was beginning to utter them!

"But that explains it!" her voice was saying, with a note of pleased, friendly surprise. "I've been wondering about you, Requada-Attan, you and your mysterious, beautiful world! I should have known all along that it was simply the dream-creation of an artist—that one of your Great Illusionists was still alive!"

The last words seemed to drop one by one into a curiously leaden silence, and then they stopped. Jasse was still only completely, incredulously astonished. Then something began to stir in that heavy silence about her; and her head came sharply around.

It was their faces that warned her—once before, she'd seen the expression of a mob that was acting under mental compulsion; and so she knew at once and exactly what she'd have to do next. Not stop to figure out what had happened, or try to reason with them, argue, threaten, or waste time yelling for help. Just get out of the immediate neighborhood, fast!

There weren't, of course, really enough Ulphians around to be called a mob—hardly more than twenty adults in all. That they had been directed against her was obvious enough, in the eyes that saw only her now, and in the synchronized motion with which they were converging quietly on the spot where she stood.

They stopped moving as if at a command Jasse could not hear, as she swung about, unconsciously with a very similar quietness, to face them.

Requada-Attan was under it, too! He still stood nearest her, about four steps to her left. Straight ahead, between Jasse and the gate, was the next closest group: two husky-looking young men with the shaved heads and yellow robes of professionals from the School of Athletes; and immediately behind them another silver-robed historian whom she had noticed previously—an elderly man, very thin and tall. No weapons in sight anywhere—

The three ahead were the ones to pass then! Jasse took two quick steps in their direction; and gravel scattered instantly under their sandaled feet, as they came to meet her in a rush. All about was the same sudden noise and swirl of motion.

But it was Requada-Attan who reached her first, with a quickness she hadn't counted on in a man of his plump build. Abruptly his weight was dragging at her arm, both hands gripped about her wrist, and jerking sideways to throw her off balance. Jasse twisted free sharply—that wrist carried her mind-shield bracelet and had to be guarded!—hauled the Hereditary Custodian off his feet with her right hand, hesitated a moment, half turned and rather regretfully sent him rolling before the knees of the charging yellow-robes.

They went down in a satisfactorily sprawling confusion, the thin historian turning a complete clumsy somersault with flapping garments across them a moment later. But the others had arrived by then, and Jasse became temporarily the center of a

clawing, grappling, hard-breathing but voiceless cluster of humanity. What sent the first shock of real fright through her was that most of them seemed to be trying to get at her shield-bracelet! Because that indicated a mental attack was impending—mental attacks and mass compulsions on present-day Ulphi!

The jolt of that realization—the implication that hidden powers had been roused into action against her on this innocuous-looking world—might have resulted in a rash of snapping necks and other fatal incidents all around Jasse. Though Cultures frowned on weapons for its officials, the ancient Terran Art of the Holds was highly regarded among Traditionalists everywhere and had been developed by them to a polished new perfection. But she hauled herself back promptly from the verge of slipping into that well-drilled routine, which she never yet had put to its devastating practical use. The situation, so far, certainly wasn't as bad as all that—if she just kept her head! Slapping, shoving, shaking and turning, she twisted her way through this temporarily demented group of little-people, intent primarily on staying on her feet and keeping her left wrist out of reach.

Then the yellow-robed athletes were up again, and Jasse bumped the two shaven heads together with measured violence, stepped with great caution across an overturned but viciously kicking little boy—found herself suddenly free, and tripped up the last of the lot to come plunging in, a youngish, heavy-set woman.

The brief and practically bloodless melee had circled to within a dozen strides of the gateway of the park. She darted through it, slammed the high bronze gate behind her, saw Requada-Attan's key still in the lock and had her assailants shut in an instant later.

She could spare a moment then to look back at them. Most of them were still on the ground or clambering awkwardly to their feet. With one exception, all stared after her with those chillingly focused and expressionless eyes. The exception was a white-robed, dark-skinned man of middle age with a neatly trimmed fringe of brown beard around his chin, who stood on a tiled walk a little apart from the others. He was watching them, and Jasse could not recall having noticed him before.

Then their eyes met for an instant as she was turning away, and there was conscious intelligence in his look, mingled with something that might have been fright or anger.

At least, she thought, loping worriedly down one of the corridors towards the main halls of the Institute from which she had come, she wasn't the only one who had got a surprise out of the affair! She would have time to think about that later. The immediate problem was how to get out of this mess, and it would be stupid to assume that she had succeeded in that.

There were plenty of other people

in those buildings ahead, and she had no way at all of knowing what their attitude would be.

III.

She came with swift caution out of the corridor, into a long, sun-bright and apparently deserted hall.

The opposite wall was formed of vertical blue slabs of some marble-like mineral with wide window embrasures between. The tops of feathery trees and the upper parts of buildings, a good distance off, were visible beyond the windows. Several hundred feet away in either direction a high doorway led out of the hall.

Both exits were blocked just now by a wedged, immobile mass of little-people. Robes of all colors—citizens of all types and classes, hastily assembled to stop her again. Even at this distance their faces sickened her. Apparently they had been directed simply to prevent her from leaving this hall, until—

It clamped down then about her skull—and tightened!

Mental attack!

Jasse's hands leaped to her temples in a convulsive, involuntary motion, though she knew there was nothing tangible there to seize. It was inside her, an enormous massing of tiny, hard pressures which were not quite pain, driving upon an equal number of critical linkages within her brain. In her first flash of panicky reaction, it seemed the burst of an overwhelming, irresistible force. A moment later, she realized it was quite bearable.

She should have known, of course—with her mind-shield activated as it was, it would take some while before that sort of thing could have much effect. The only immediately dangerous part of it was that it cut down the time she could afford to spend on conducting her escape.

She glanced again at the nearer of the two doorways, and knew instantly she wasn't even going to consider fighting her way through another mindless welter of grappling human bodies like that! The nearest window was a dozen steps away.

A full hundred yards beneath her, the building's walls dropped sheer into a big, blue-paved courtyard, with a high-walled park on the opposite side and open to the left on a city street, a block or more away. The street carried a multicolored, murmuring stream of traffic, too far off to make any immediate difference. A few brightly dressed people were walking across the courtyard below—they made no difference either. The important thing was the row of flow-cars parked against the wall down there, hardly eighty feet to her right.

Her hand dropped to her belt and adjusted the gravmoc unit. She felt almost weightless as she swung over the sill and pushed away from the building; but she touched the pavement in something less than eighteen seconds, rolled over twice and came up running.

There was scattered shouting then.

Two young women, about to step out of one of the cars, stared in open-mouthed surprise as she came towards them. But neither they nor anyone else made any attempt to check her departure.

She had one of the vehicles airborne, and headed in the general direction of the lake-front section which was being used as a spaceport by the one Vegan destroyer stationed on Ulphi, before she was reminded suddenly that Central City had police ships for emergency use, which could fly rings around any flow-car—and that long, silvery, dirigiblelike shapes seemed to be riding on guard directly over the area to which she wanted to go!

A few minutes later, she realized the ship might also be several miles to either side of the spaceport. At this distance and altitude she couldn't tell, and the flow-car refused to be urged any higher.

She had kept the clumsy conveyance on its course, because she hadn't really much choice of direction. There was no way of contacting or locating any of the other Vegan officials currently operating on Ulphi except through the destroyer itself or through the communicators in her own study; and her mobile-unit was also in the spaceport area. There were enough similar cars moving about by themselves to keep her from being conspicuous, though traffic, on the whole, was moderate over the city and most of it was confined to fairly definite streams between the more important points.

A second police ship became briefly visible far to her right, gliding close to the building tops and showing hardly more than its silhouette through a light haze which veiled that sector. If they knew where she was, either of the two could intercept her within minutes.

Very probably though, Jasse reassured herself, nobody did know just where she was. The mental force still assailing her shield was nondirectional in any spatial sense; and her departure from the Historical Institute must have been much more sudden and swift than had been anticipated by her concealed attackers. In spite of her size, strangers were quite likely to underestimate her because of her slender build and rather childlike features, and on occasions like this that could be very useful. But—

Jasse bit her lip gently, conscious of a small flurry of panic bubbling up inside her and subsiding again, temporarily.

Because they needed only to ring off the spaceport, far enough away from the destroyer to avoid arousing its interest, and then wait for her arrival. She would have to come to them then—and soon! Her shield was still absorbing the punishment it was getting, but secondary effects of that unrelenting pressure had begun to show up. The barest touch of a dozen different, slowly spreading sensations within her brain—burning, tingling, constricting, dully throbbing sensations. Within the last few minutes,

the first flickering traces of visual and auditory disturbances had appeared. Effects like that could build up for an indeterminate time without doing any real damage. But in the end they would merge suddenly into an advanced stage of blurred confusion—technically, her shield might still maintain its function; but she would no longer know or be able to control what she did.

A curiously detached feeling overcame Jasse then as the flow-car carried her steadily forward into whatever lay ahead. What she had to do was clear enough: go on until she was discovered and then ground the flow-car and try her luck on foot. But meanwhile, who or what had stirred up this mess about her? What were they after?

She sat quietly behind the flow-car's simple controls, leaning forward a trifle to conceal herself, while her mind ran over the implications of the odd little speech she had made in the park before Moyuscane's tomb. Those hadn't been her thoughts; if they had been, she wouldn't have uttered them voluntarily—so, shielded or not, somebody must have been tampering with her mind before this! Were there opposing groups of mental adepts on Ulphi, and was one of them trying to use her, and Vega, against the other in some struggle for control of this planetary civilization?

Once more then, System Chief Jasse surprised herself completely—this time by a flash of furious exasperation with the lofty D. C. policies which had put her in a spot like this unarmed. To trust in the innate rightness of A-Class humanity was all very well. But, mysterious superior mentalities or not, a good, ordinary, old-fashioned blaster in her hand would have been *so* satisfactory just now!

"Oh, Suns and Planets!" Jasse muttered aloud, shocked into a half-forgotten Traditionalist invocation acquired during her childhood. "They've got me fighting mad!"

And at that moment, a clean-edged shadow, which was not the shadow of any cloud, came sliding soundlessly over the flow-car and stayed there.

Jasse, heart pounding wildly, was still trying to twist around far enough to look up without pitching herself out of the car or releasing its controls when a voice, some twenty feet above her, remarked conversationally:

"Say—I thought it was you!"

She stared up speechlessly.

The words had been Vegan—and nothing like that dull-green, seamless, thirty-foot sliver of space-alloy floating overhead had even been dreamed up on Ulphi! While the pert, huge-eyed face that peered down at her out of the craft's open lock—she remembered suddenly the last time she'd met that member of a nonhuman race in a G. Z. space-duty uniform and the polite effort she'd made to mask the antipathy and suspicions which were bound to arise in a Traditionalist when confronted by

any such half-and-half creature.

But—safe!

A shaking began in her knees. She sat down quietly.

And Zone Agent Pagadan, for whom any kind of thought-shield on which she really directed her attention became as sheerest summer gossamer—unless, of course, it was backed by a mind that approximated her own degree of nerve-energy control—smiled amiably and chalked one up to her flair for dramatic timing.

"Remember me, eh?" she nodded. "Pelial, of Galactic Zones, at your service! I was scoping the area from ten miles above and spotted you drifting along by yourself. What occurs, my tall colleague? Are you just going sightseeing in that piece of primitive craftsmanship, or did your pilot fall out?"

"Ulp—!" began Jasse, nodding and shaking her head at the same time. Pagadan's contemplative eyes became a little bigger.

"Skip it!" she said apprehensively. "From close up, you look both chewed on and distraught, my girl! What happ— Hey, hang on a moment and I'll slide in close and take you aboard. Maybe you ought to be home in bed, or something."

The head withdrew; and Jasse took a deep, sighing breath, raked a snarled strand of black hair out of her forehead and dabbed tentatively at a deep scratch on the back of her hand.

She did look a mess, now that she noticed it—the Greens were badly ripped and streaked with the blue chalk of the pavement over which she had rolled; and her jeweled cap was gone. A moment passed before she realized suddenly that the clinging constrictions of the mental attack were gone, too!

She was still wondering about that as she swung over into the space-skiff, steadied by Pagadan's gloved hand.

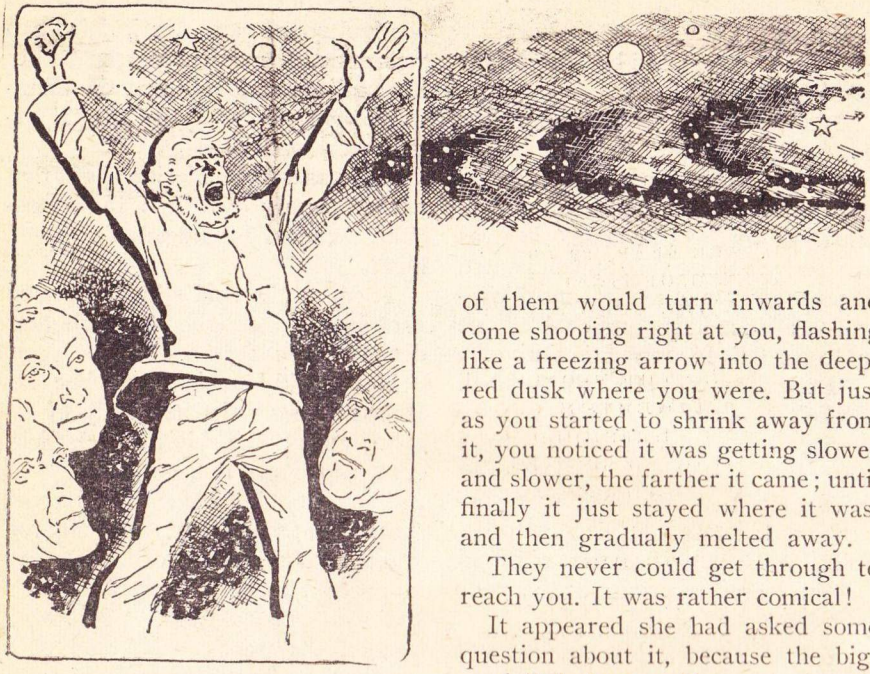
Then, as the skiff's lock slammed shut behind her, she made another discovery:

Her shield-bracelet hung free, attached to her wrist now only by its safety chain. The shield switch flickered, warningly red, on "Open"—

"Your mind-shield?" The Lannai Agent, measuring a rose-colored liquid carefully from a fat little jug into a cup, absently repeated Jasse's stunned exclamation. "Probably snagged the bracelet while you were climbing in from the car. It happens." She glanced around and her eyes caught the light with a wicked crystalline glitter. "Why? Could it matter? Was someone pressuring you?"

"They were before," Jasse whispered; and suddenly there wasn't any question about her being frightened! Panic hammered into her brain and stayed; a dizzy shimmering grew before her eyes. Mixed with that came a queer, growing feeling as if something were surging and pulsing within her skull—a wildly expectant feeling of *something* about to happen.

She realized the Lannai was holding the filled cup to her lips.



"Drink that!" the cool voice ordered. "Whatever you've got it's good for. Then just settle back, relax, and let's hear what you know!"

The liquid she had gulped, Jasse noticed, wasn't really rose-colored as she had thought, but a deep, dim, ruby red, almost black—an enormously *quiet* color—and with a highly curious slowing-down effect on things, too! For instance, you might realize perfectly well that somewhere, out around the edges of you, you were still horribly upset, with fear-thoughts racing about everywhere at a dizzy speed. Every so often, one of them would turn inwards and come shooting right at you, flashing like a freezing arrow into the deep-red dusk where you were. But just as you started to shrink away from it, you noticed it was getting slower and slower, the farther it came; until finally it just stayed where it was, and then gradually melted away.

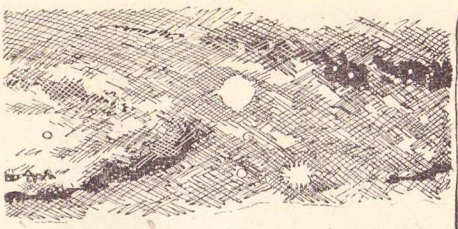
They never could get through to reach you. It was rather comical!

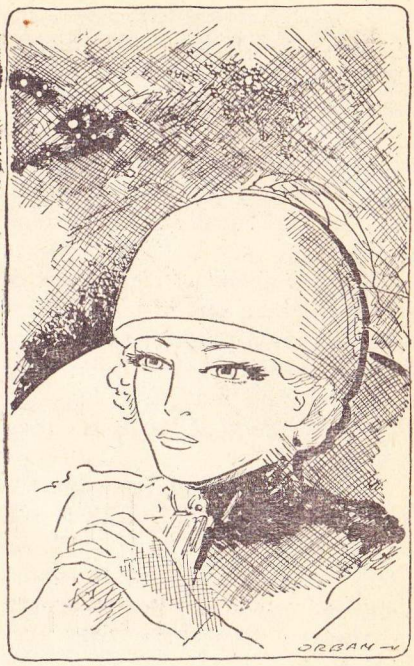
It appeared she had asked some question about it, because the big-eyed little humanoid was saying:

"You like the effect, eh? That's just antishock, little chum! Thought you knew the stuff . . . don't they teach you anything at Cultures?"

That was funny, too! Cultures, of course, taught you everything there was to know! But wait—hadn't there been . . . what had there been that she—? Jasse decided to examine that point about Cultures very carefully, some other time.

By and large there seemed to be a good deal of quiet conversation going on around her. Perhaps she was doing some of it, but it was hard to tell; since, frankly, she wasn't much interested in those outside events any more. And then, for a while, the two





tall shapes, the man and the woman, came up again to the barrier in her past and tried to talk to her, as they always did when she was feeling anxious and alone. A little puzzled, because she didn't feel that way now, Jasse watched them from her side of the barrier, which was where the explosions and shrieking lights were, that had brought terror and hurt and the sudden forgetting which none of Culture's therapists had been able to lift. Dimly, she could sense the world behind them, to which they wanted her to go—the star-glittering cold and the great silent flows of snow, and the peace and enchantment that were there. But she could make no real effort to reach it now, and in the end the tall shapes seemed to realize that and went away.

Or else, they merely faded out of her sight as the color about her deepened ever more from ruby redness into the ultimate, velvety, all-quieting, all-slowing-down *black*—

"Wonderful—" Jasse murmured contentedly, asleep.

"Hallerock?"

"Linked in, Pag! I'm back on the Observation Ship again. Go ahead."

"Just keep this thought-line down tight! Everything's working like a charm, so far. I tripped the D. C.'s shield open when I took her aboard, and our good friend Moyuscane came right in, all set to take control and find out whether we actually knew something about him and his setup here or not. Then he discovered I was around, and he's been lying quiet and just listening through her ever since."

"What makes him shy of you?" Hallerock inquired.

"He tried a long-range probe at my shields a couple of weeks ago. I slapped him on the beak—some per-

fectly natural startled-reaction stuff by another telepath, you understand. But he certainly didn't like it! He went out fast, that time—"

"I don't blame him," Hallerock said thoughtfully. "Sometimes you don't realize your own strength. Does the D. C. really have anything on him?"

"No. It's about as we suspected. She made some sort of innocent remark—I couldn't take the chance of digging around in her mind long enough to find out just what—and Moyuscane jumped to the wrong conclusions."

"I was wondering, you know," Hallerock admitted, "whether you mightn't have done some work on the Cultures girl in advance—something that would get her to drop a few bricks at some appropriate occasion."

"Well, you're just naturally a suspicious little squirt!" Pagadan replied amiably. "To use Confederacy personnel against their will and knowledge for any such skulduggery is strictly counter-regulation. I advise you to make a note of the fact! However, it was the luckiest sort of coincidence. It should save us a week or two of waiting, especially since you have the hospital ship and staff all prepared. Moyuscane's got himself a listening-post right in our ranks now, and that's all he needs to stay reasonably safe—he thinks!"

Hallerock appeared to be digesting this information for a moment. Then his thought came again:

"Where are you at present?"

"Down at the Central City spaceport, still in the *Viper's* skiff. The D. C.'s under antishock and asleep on the bunk here."

"Oh," said Hallerock, "you're all ready to start the drive then?"

"Wake up, little brother!" Pagadan advised him. "It started ten minutes ago! The last thing I told the girl before she went down deep was that a Vegan Fleet Hospital Ship was approaching Ulphi with a brand-new, top-secret drug against space-fear, called Kynoleen—a free gift from the Confederacy to the afflicted population of this planet!"

"Well . . . I suppose I'd better set the H-Ship down at the spaceport about an hour from now, then?"

"One hour would be about right. Moyuscane must be in a considerable stew at the prospect of having the Kynoleen disclose the fact that most of the local population is suffering from an artificially imposed space-fear psychosis, but it won't take him long to see to it that the drug won't actually be used around here for quite some time. When that's settled, we'll let him breathe easier for about three hours. Then I'll wake up the D. C., make sure he's listening through her and feed him the *big* jolt. So see I get that message we've prepared half an hour beforehand—three hours and thirty minutes from now! And send it as a straight coded communication, to make it look authentic."

"All right," Hallerock said doubtfully. "But wouldn't it be better to check over the entire schedule once

more—just to be sure nothing can go wrong?"

"There's no need for that!" the Lannai said, surprised. "We've got Moyuscane analyzed down to the length of his immortal whiskers, and we've worked out the circumstances required to produce the exact effects we want. It's just a matter of timing it now! You're not letting yourself get rattled by a Telepath of the Second Order, are you? If he didn't happen to have the planet under control, this wouldn't be a job for Galactic Zones at all."

"Possibly not," said Hallerock reasonably, "but then he does have it under control. Enough to hash it up from one pole to the other if he panics. That's what keeps putting this dew on my brow."

"Agent-Trainee Hallerock," Pagadan replied impatiently, "I love you like a son or something, but at times you talk like a dope. Even a Telep-Two doesn't panic, unless you let him get the idea he's cornered. All we've got to do is keep Moyuscane's nose pointed towards the one way out and give him time enough to use it when we switch on the pressure—but not quite time enough to change his mind again! If it makes you feel any better, you could put trackers on any unprotected Vegans for the next eight hours."

Hallerock laughed uneasily. "I just finished doing that," he admitted.

Pagadan shrugged. Gloomy old Hallerock! From here on out, he'd be waiting for the worst to happen, though this kind of a job, as anyone who had studied his training records would know, was right up his alley. And it had been a pleasure, at that, to observe the swift accuracy with which he'd planned and worked out the schedule and details of this operation, in spite of head-shakings and forebodings. The only thing he couldn't possibly have done was to take the responsibility for it himself!

She smiled faintly, and came over to sit down for a while beside the bunk on which Jasse was lying.

Two hours later, when her aide contacted her again, he seemed comparatively optimistic.

"Reaction as predicted," he reported laconically. "I'm beginning to believe you might know what you're doing."

"Moyuscane's got the Kynoleen space-tests stalled?"

"Yes. The whole affair was hushed up rather neatly. The H-Ship is down now at some big biochemical center five hundred miles from Central City, and the staff was routed through to top officials immediately. The question was raised then whether Ulphian body-chemistry mightn't have varied just far enough from standard A-Class to make it advisable to conduct a series of local lab experiments with the drug before putting it to use. Our medics agreed and were asked, as between scientists, to keep the matter quiet meanwhile, to avoid exciting the population unduly. There also was

the expected vagueness as to how long the experiments might take."

"It makes it so much easier," Pagadan said gratefully, "when the opposition is using its brains! Was anyone shown around the ship?"

"A few dozen types of specialists are still prowling all over it. They've been introduced to our personnel. It seems a pretty safe bet," Hallerock acknowledged hesitantly, "that Moyuscane has discovered there isn't a shielded mind among them, and that he can take control of the crate and its crew whenever he wants." He paused. "So now we just wait a while?"

"And let him toy around with the right kind of ideas," agreed Pagadan. "He should be worried just enough by now to let them come floating up naturally."

Night had fallen over Central City when the message she was expecting was rattled suddenly from the skiff's communicator. She decoded it, produced evidence of considerable emotional shock, shook Jasse awake and, in a few dozen suitably excited sentences, handed Moyuscane his jolt. After that, though, there were some anxious moments before she got her patient quieted down enough to let the antishock resume its overall effect.

"She kept wanting to get up and do something about it!" Pagadan reported to Hallerock, rubbing a slightly sprained wrist. "But I finally got it across that it wasn't Cultures' job to investigate undercover mass homicide on a foreign planet, and that one of our own Zone Agents, no less, was landing secretly tomorrow to take charge of the case."

"And that," said Hallerock darkly, "really *is* switching on the pressure!"

"Just pressure enough for our purpose! It's still a big, hidden organization that's suspected of those fancy murder rituals, and not just one little telepath who's played at being planetary god for the past few centuries. Of course, if we'd pointed a finger straight at Moyuscane himself, he would have cracked right there!"

She passed a small handkerchief once, quickly, over her forehead. "This kind of thing is likely to be a bit nerve-wracking until you get used to it," she added reassuringly. "I can remember when I've felt just about as jumpy as you're feeling now. But all we have to do is to settle down and let Moyuscane work out his little problem by himself. He can't help seeing the answer—"

But a full two hours passed then, and the better part of a third, while Pelial, the minor official of Galactic Zones, continued to work quietly at her files of reports and recordings, and received and dispatched various coded communications connected with the impending arrival of her superior—the hypothetical avenging Zone Agent.

By now, she conceded at last, she might be beginning to feel a little disturbed, though, naturally, she had prepared alternative measures, in case—

Hallerock's thought flashed ques-

tioningly into her mind then. For a moment, Pagadan stopped breathing.

"Linked!" she told him crisply. "Go ahead!"

"The leading biochemists of Ulphi," Hallerock informed her, "have just come up with a scientific achievement that would be regarded as noteworthy almost anywhere—"

"You subhuman comic!" snapped Pagadan. "*Tell* me!"

". . . Inasmuch as they were able to complete—analyze, summarize and correlate—all tests required to establish the complete harmlessness of the new space-fear drug Kynoleen for all type-variations of Ulphian body-chemistry. They admit that, to some extent, they are relaying—"

"Hallerock," Pagadan interrupted, in cold sincerity now, "you drag in one more unnecessary detail, and the very next time I meet you, you're going to be a great, big, ugly-looking dead body!"

"That's not like you, Pag!" Hallerock complained. "Well, they rushed fifty volunteers over to the H-Ship anyway, to have Kynoleen given a final check in space right away—all Ulphi is now to have the benefit of it as soon as possible! But nobody seemed particularly upset when our medics reminded them they had been informed that the ship was equipped to conduct tests on only *one* subject at a time—"

Pagadan drew a shivery breath and sat suffused for a moment by a pure, bright glow of self-admiration.

"When will they take off with him?" she inquired with quiet triumph.

"They took off ten mintues ago," her aide returned innocently, "and headed straight out. As a matter of fact, just before I beamed you, the test-subject had discovered that ten minutes in space will get you a whole lot farther than any Telep-Two can drive a directing thought. It seemed to disturb him to lose contact with Ulphi—WOW! Watch it, Pag! Supposing I hadn't been shielded when that lethal stunner of yours landed!"

"That's a beautiful supposition!" hissed Pagadan. "Some day, you won't be! But the planet's safe, anyway—I guess I can forgive you. And now, my friend, you may start worrying about the ship!"

IV.

"I've got to compliment you," she admitted a while later, "on the job you did when you installed those PT-cells. What I call perfect coverage! Half the time I don't know myself from just what point of the ship I'm watching the show."

She was curled up now in a large chair, next to the bunk on which Jasse still slumbered quietly; and she appeared almost as completely relaxed as her guest. The upper part of her head was covered by something like a very large and thick-walled but apparently light helmet, which came down over her forehead to a line almost with her eyes, and her eyes were closed.

"Just at the moment"—Hallerock hesitated—"I think you're using the Peeping Tommy in the top left corner of the visitank Moyuscane's looking into. He still doesn't really like the idea of being out in deep space, does he?"

"No, but he's got his dislike of it under control," Pagadan said lazily. "He's the one," she added presently, "who directed the attack on our D. C. today at the Historical Institute. She has a short but very sharp memory-picture of him. So it *is* Moyuscane, all right!"

"You mean," Hallerock asked, stunned, "you weren't really sure of it?"

"Well—you can't ever be *sure* till everything's all over," Pagadan informed him cheerfully. "And then you sometimes wonder." She opened her eyes, changed her position in the chair and settled back carefully again. "Don't you pass out on me, Hallerock!" she warned. "You're supposed to be recording every single thing that happens on the H-Ship for Lab!"

There hadn't been, Hallerock remarked, apparently still somewhat disturbed, very much to record as yet. The dark-skinned, trimly bearded Ulphian volunteer was, of course, indulging in a remarkable degree of activity, considering he'd been taken on board solely as an object of scientific investigation. But no one about him appeared to find anything odd in that. Wherever he went, padding around swiftly on bare feet and dressed in a set of white hospital pajamas, the three doctors who made up the ship's experimental staff followed him earnestly, with a variety of instruments at the ready, rather like a trio of mother hens trailing an agitated chicken. Occasionally, they interrupted whatever he was doing and carried out some swift examination or other, to which he submitted indifferently.

But he spoke neither to them nor to any of the ship's officers he passed. And they, submerged in their various duties with an intentness which alone might have indicated that this was no routine flight, appeared unaware of his presence.

"The old boy's an organizer," Pagadan conceded critically. "He's put a flock of experts to work for him, and he's smart enough to leave them alone. They've got the ship on her new course by now, haven't they? Can you make out where they think they're going?"

Hallerock told her.

"An eighty-three day trip!" she said thoughtfully. "Looks like he didn't want to have anything at all to do with us any more! Someone on board must know what's in that region—or was able to get information on it."

Up to the end, that was almost all there was to see. At a velocity barely below the cruising speed of a Vegan destroyer, the H-Ship moved away from Ulphi. Like a harried executive, too involved in weighty responsibilities to bother about his informal attire, the solitary Ulphian continued to roam about within the

ship, disregarded by all but his attendant physicians. But finally—he was back in the ship's big control room by then and had just cast another distasteful glance at the expanse of star-glittering blackness within the visitank between the two pilots—Moyuscane began to speak.

It became startlingly clear in that instant how completely alone he actually was among the H-Ship's controlled crew. Like a man who knows he need not act with restraint in a dream peopled by phantoms, the ex-ruler of Ulphi poured forth what was in his mind, in a single screaming spurt of frustrated fury and fears and hopes that should have swung the startled attention of everybody within hearing range upon him, like the sudden ravings of a madman.

The pilots became involved with the chief navigator and his two assistants in a brisk five-cornered discussion of a stack of hitherto unused star-plates. The three doctors—gathered about the couch on which Moyuscane sat—exchanged occasional comments with the calm unhurriedness of men observing the gradual development of a test, the satisfactory conclusion of which already is assured.

As suddenly as the outburst had begun, it was over. The Ulphian wiped his mouth with the back of his hand, and sat scowling quietly at the floor.

"I think," said Pagadan, "you could start the destroyers out after them now, Hallerock!"

"I just did," Hallerock said. "I clocked the end of 'minimum effective period' right in the middle of that little speech."

"So did I," she replied. "And I hope it won't be too long now. I've got work to do here, and it shouldn't wait."

There were sufficiently deadly gadgets of various types installed throughout the fugitive ship, which they could have operated through the PT-cells. But since all of them involved some degree of risk to the ship's personnel they were intended for emergency use only—in case Moyuscane attempted to vent his annoyance with the change in his worldly fortunes on one of his new subjects. Pagadan, however, had not believed that the recent lord of all Ulphi would be capable of wasting any part of his reduced human resources for any motive so impractical as spite.

Convinced by now that she was right in that, she waited, more patiently on the whole than Hallerock, for something safer than gun or gas to conclude Moyuscane's career.

It caught up with him some twenty minutes later—something that touched him and went through him in a hardly perceptible fashion, like the twitching of a minor electric shock.

The reaction of the two watchers was so nearly simultaneous that neither knew afterwards which of them actually tripped the thought-operated mechanism which filled the H-Ship briefly with a flicker of cold radiation near the upper limit of

visibility for that particular crew.

To that signal, the ship's personnel reacted in turn, though in a far more leisurely manner. They blinked about doubtfully for a few seconds as if trying to remember something; and then—wherever they were and whatever they happened to be doing—they settled down deliberately on chairs, bunks, beds, and the floor, stretched out, and went to sleep.

Moyuscane alone remained active, since his nerve centers had not been drenched several days before with a catalyst held there in suspense until that flare of radiance should touch it off. Almost within seconds though, he was plucked out of his appalled comprehension of the fact that there was no longer a single mind within his reach that would respond to control. For Kynoleen gave complete immunity to space-fear within the time limit determined by the size of the dose and the type of organism affected, but none at all thereafter. And whatever the nature of the shattering terrors the hidden mechanisms of the mind flung up when gripped in mid-space by that dreaded psychosis, their secondary effects on body and brain were utterly devastating.

Swiftly and violently, then, Moyuscane the Immortal died, some four centuries after his time, bones and muscles snapping in the mounting fury of the Fear's paroxysms. Hallerock, still conscientiously observing and recording for G. Z. Lab's omnivorous files, felt somewhat sick. But Pagadan appeared undisturbed.

"I'd have let him out an easier way if it could have been done safely," her thought came indifferently. "But he would, after all, have considered this barely up to his own standards of dispatch. Turn the ship back now and let the destroyers pick it up, will you, Hallerock? I'll be along to see you after a while—"

The *Viper* came slamming up behind the Observation Ship some five hours later, kicked it negligently out of its orbit around Ulphi, slapped on a set of tractors fore and aft, and hauled it in, lock to lock.

"Just thirty-five seconds ago," Hallerock informed Pagadan coldly as she trotted into the O-Ship's control room, "every highly-condemned instrument on this unusually-condemned crate got knocked clean out of alignment! Any suggestions as to what might have caused it?"

"Your language, my pet!" Pagadan admonished, for his actual phrasing had been more crisp. She flipped a small package across his desk into his hands. "To be studied with care immediately after my departure! But you might open it now."

A five-inch cube of translucence made up half the package. It contained the full-length image of a slender girl with shining black hair, who carried a javelin in one hand and wore the short golden skirt of a contestant in the planetary games of Jeltad.

"Cute kid!" Hallerock acknowl-

edged. "Vegan, eh? The rest of it's a stack of her equation-plates? Who is she and what do I do about it?"

"That's our Department of Cultures investigator," Pagadan explained.

"The System Chief?" Hallerock said surprised. He glanced at the image again, which was a copy of one of Snoops' three-dimensionals, and looked curiously up at the Lannai. "Didn't you just finish doing a mental job on her?"

"In a way. Mostly a little hypno-information to bring her up to date on what's been going on around Ulphi—including her part in it. She was asleep in that D. C. perambulator she's camping in here when I left her."

"As I understand it," Hallerock remarked thoughtfully, "the recent events on Ulphi would be classified as information very much restricted to Galactic Zones! So you wouldn't have spotted the makings of a G. Z. parapsychic mind in a D. C. System Chief, would you?"

"Bright boy! I'll admit it's an unlikely place to look for one, but she *is* a type we can use. I'm releasing her now for G. Z. information, on Agent authority. Her equation-plates will tell you how to handle her in case she runs into emotional snags while absorbing it. You're to be stationed on Ulphi another four months anyway, and you're to consider that a high-priority part of your job."

"I will? Another four months?" Hallerock repeated incredulously. "I was winding up things on the O-Ship to start back to Jeltad. You don't need me around here any more, do you?"

"I don't, no!" Pagadan appeared to be quietly enjoying herself. "The point is though, I'm the one who's leaving. Got word from Central two hours ago to report back at speed, just as soon as we'd mopped up Old Man Moyuscane."

"What for?" Hallerock began to look bewildered. "The Agent work isn't finished here."

She shook her head. "Don't know myself yet! But it's got to do with the recordings on those pickled Bjantas you homed back to Lab. Central sounded rather excited." The silver eyes were sparkling with unconcealed delight now. "It's to be a Five-Agent Mission, Hallerock!" she fairly sang. "Beyond Galactic Rim!"

"Beyond the Rim? For Bjanta? They've got something really new on them then!" Hallerock had come to his feet.

Pagadan nodded and smacked her lips lightly. "Sounds like it, doesn't it? New and conclusive—and we delivered it to them! But now look what face it's making," she added maliciously, "just because it doesn't get to go along!"

Hallerock scowled and laughed. "Well, I've been wondering all this time about those Bjantas. Now you take out after them—and I can hang around Ulphi dishing out a little therapy to a D. C. neurotic."

"We all start out small," said the

Lannai. "Look at me—would you believe that a few short years ago I was nothing but the High Queen of Lar-Sancaya? Not," she added loyally, "that there's a sweeter planet anywhere, from the Center to the Clouds or beyond!"

"And that stretch distinctly includes Ulphi!" Hallerock stated, unreconciled to his fate. "When's the new Agent coming out to this hive of morons?"

Pagadan slid to her feet off the edge of the desk and surveyed him pityingly. "You poor chump! What I gave you just now was Advance Mission Information, wasn't it? Ever hear of a time that wasn't restricted to Zone Agent levels? Or do I have to tell you officially that you've just finished putting in a week as a Z. A. under orders?"

Hallerock stared at her. His mouth opened and shut and opened again. "Here, wait a—" he began.

She waved him into silence with both fists.

"Close it kindly, and listen to the last instructions I'm giving you! Ulphi's being taken in as a Class 18 System—outpost garrison. I imagine even you don't have to be told that the only thing not strictly routine about the procedure will be the elimination of every traceable connection between its present culture and Moyuscane's personal influence on it—and our recent corrective operation?"

"Well, of course!" Hallerock said hoarsely. "But look here, Pag—"

"Considerable amount of detail work in that, naturally—it's why the monitors at Central have assigned you four whole months for the job! When you're done here, report back to Jeltad. They've already started roughing out your robot, but they'll need you around to transfer basic impulse patterns and so on. A couple of months more, and you'll be equipped for any dirty work they can think up—and I gather the Chief's already thought up some sweet ones especially for you! So God help you—and now I'm off. Unless you've got some more questions?"

Hallerock looked at her, his face impassive now. If she had been human he couldn't have told her. But, unlike most of the men of Pagadan's acquaintance, Hallerock never forgot that the Lannai were of another kind. It was one of the things she liked about him.

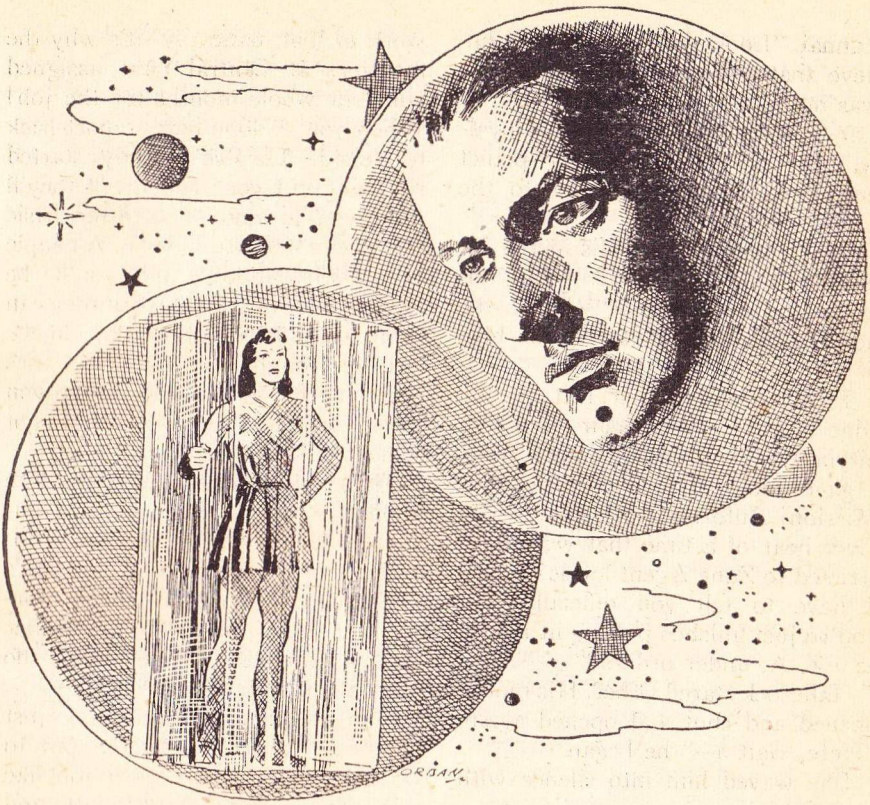
"No, I haven't any questions just now," he said. "But if I'm put to work by myself on even a job like this, I'm going to feel lost and alone. I just don't have the feeling that I can be trusted with Z. A. responsibility."

Pagadan waved him off again, impatiently.

"The feeling will grow on you," she assured him.

And then she was gone.

As motion and velocity were normally understood, the *Viper's* method of homeward progress was something else again. But since the only exact definition of it was to be found in a highly complex grouping of



mathematical concepts, such terms would have to do.

She was going home, then, at approximately half her normal speed, her automatic receptors full out. Pagadan sat at her desk, blinking reflectively into the big vision-tank, while she waited for a call that had to be coming along any moment now.

She felt no particular concern about it. In fact, she could have stated to the minute how long it would take Hallerock to recover far enough from the state of slight shock she'd left him in to reach out for the set of dossier-plates lying on his desk. A brief section of System Chief Jasse's recent behavior-history, with the motivation patterns underlying it, was revealed in those plates, in the telepathic shorthand which turned any normally active hour of an individual's life into as complete a basis for analysis as ordinary understanding required.

She'd stressed that job just enough

to make sure he'd attend to it before turning to any other duties. And Hallerock was a quick worker. It should take him only three or four minutes to go through the plates, the first time.

But then he'd just sit there for about a minute, frowning down at them, looking a little baffled and more than a little worried. Poor old Hallerock! Now he couldn't even handle a simple character-analysis any more unaided!

Grimly he'd rearrange the dossier-plates, tap them together into a neat little pile, and start all over again. He'd go through each one very slowly and carefully now, determined to catch the mistake that *had* to be there!

Pagadan grinned faintly.

Almost to the calculated second, his search-thought came flickering after her down the curving line to Jeltad. As the *Viper's* receptors caught it and brought it in, she flipped over the transmitter switch:

"Linked, Hallerock — nice reach you've got! What gives, my friend?"

There was a short pause; then:

"Pag, what's wrong with her—the D. C., I mean?"

"Wrong with her?" Pagadan returned, on a note of mild surprise.

"In the plates," Hallerock explained carefully. "She's an undeveloped parapsychic, all right—a Telep-Three, at the least. But she's also under a master-delusion — thinks she's a physical monster of some kind! Which she obviously isn't."

The Lannai hesitated, letting a trickle of uncertainty through to him to indicate a doubtful mental search. There wasn't, after all, anything that took quite such ticklish, sensitive handling as a parapsychic mind that had gone thoroughly off the beam.

"Oh, that!" she said, suddenly and obviously relieved. "That's no delusion, Hallerock—just one of those typical sublevel exaggerations. No doubt I overemphasized it a little. There's nothing wrong with her really—she's A-Class plus. Very considerably plus, as you say! But she's not a Vegan."

"Not a Vegan? Well, why should—"

"And, of course, she's always been quite sensitive about that physical peculiarity!" Pagadan resumed, with an air of happy discovery. "Even as a child. But with the Traditionalist training she was getting, she couldn't consciously admit any awareness of isolation from other human beings. It's just that our D. C.'s a foundling, Hallerock. I should have mentioned it, I suppose. They picked her up in space, and she's of some unidentified human breed that grows around eight foot tall—"

Back in the study of her mobile-unit, System Chief Jasse wiped her eyes, blew her nose, and pocketed her handkerchief decisively.

She'd blubbered for an hour after she first woke up. The Universe of the Traditionalists had been such a nice, tidy, easy-to-understand place to live in, even if she'd never felt *completely* at her ease there! It had

its problems to be met and solved, of course; and there were the lesser, nonhuman races, to be coolly pitied for their imperfections and kept under control for their own good, and everybody else's. But A-Class humanity could work itself into such a dismally gruesome mess as it had done on Ulphi—that just wasn't any part of the Traditionalist picture! They didn't want any such information there. They could live more happily without it.

Well, let them live happily then! She was still Jasse, the space-born, and in return for knocking down the mental house of cards she'd been living in, the tricky little humanoid at any rate had made her aware of some unsuspected possibilities of her own which she could now develop!

She began to re-examine those discoveries about herself with a sort of new, cool, speculating interest. There were two chains of possibilities really —that silent, cold, whitely enchanted world of her childhood dreams came floating up in her mind again, clear and distinct under its glittering night-sky now that the barriers that had blurred it in her memory had been dissolved. The home-world of her distant race! She could go to it if she chose, straight and unerringly, and find the warm human strength and companionship that waited there. That knowledge had been returned to her, too.

But was that what she wanted most?

There was another sort of companionship, the Lannai had implied, and a different sort of satisfaction she could gain, beyond that of placidly living out her life among her own kind on even the most beautiful of frozen worlds. They were constructing a civilized galaxy just now, and they would welcome her on the job.

She'd bathed, put on a fresh uniform and was pensively waiting for her breakfast to present itself from the wall-butler in the study, when the unit's automatic announcer addressed her:

"Galactic Zones Agent Hallerock requesting an interview."

Jasse started and half turned in her chair to look at the closed door. Now what did that mean? She didn't want to see any of *them* just yet! She intended to make up her own mind on the matter.

She said, a little resentfully:

"Well . . . let him right in, please!"

The study door opened as she flipped the lock-switch on her desk. A moment later, Hallerock was bowing to her from the entrance hall just beyond it.

Jasse began to rise, glanced up at him; and then sat back suddenly and gave him another look.

"Hello, Jasse!" Hallerock said, in a voice that sounded amiable but remarkably self-assured.

Even when not set off as now by his immaculate blue and white G. Z. dress uniform, Zone Agent Hallerock undoubtedly was something almost any young woman would look at twice. However, it wasn't so much

that he was strikingly handsome with his short-cropped dark-red hair and the clear, black-green eyes with their suggestion of some icy midnight ocean. The immediate point was that you didn't have to look twice to know that he came from no ordinary planet of civilization.

Jasse got up slowly from behind her desk and came around it and stood before Hallerock.

Basically, that was it perhaps—the world he came from! Mark Wieri VI, a frontier-type planet, so infernally deserving of its classification that only hair-brained first-stage Terrans would have settled there in the first place. Where the equatorial belt was a riot of throbbing colors, a maddened rainbow flowering and ripening, for two months of a thirty-eight month year—and then, like the rest of that bleak world forever, sheet-ice and darkness and the soundless, star-glittering cold.

Even back on Terra, two paths had been open to life that faced the Great Cold as its chosen environment. To grow squalidly tough, devoted to survival in merciless single-mindedness —or to flourish into a triumphant excess of strength that no future challenge could more than half engage.

On Mark Wieri's world, human life had adapted, inevitably, to its relentlessly crushing environment. In the two hundred and eighty-odd generations between the last centuries of the First Stellar Migrations and the day an exploring Giant-Ranger of the Confederacy turned in that direction, it had become as much a part of its background as the trout is of its pool. And no more than the trout could it see any purpose then in leaving so good a place again.

But it had not, in any sense, grown squalid.

So Jasse stood before Hallerock, and she was still looking up at him. There were nine foot three inches of him to look up to, shaped into four hundred and sixty-five lean pounds of tigerish symmetry.

The dress uniform on a duty call was a clue she didn't miss or need. The ice of his home-planet was in Hallerock's eyes; but so was the warm, loyal human strength that had triumphed over it and carelessly paid in then the full, final price of conquest. This son of the conquerors alone had been able to sense that the galaxy itself was now just wide and deep and long enough for man; and so he'd joined the civilization that was of a like spirit.

But he, too, had been a giant among little-people then. If his conscious thoughts wouldn't admit it, every cell of his body knew he'd lost his own kind.

Jasse, all her mind groping carefully, questioningly out towards this phenomenon, this monster-slayer of Galactic Zones—beginning to understand all that and a good deal more —slowly relaxed again.

A kinsman of hers! Her own eyes began to smile, finally.

"Hello, Hallerock!" Jasse said.

And that was, Pagadan decided, about the right moment to dissolve

the PT-cell she'd spent an hour installing in the wall just above the upper right-hand corner of Jasse's study mirror.

Those two baby giants might be all full of emotional flutters just now at having met someone from the old home town; but they were going to start thinking of their good friend Pagadan almost immediately! And one of the very first things that would leap to Hallerock's suspicious mind would be the possible presence of a Peeping Tommy.

Good thing those tiny units left no detectable trace!

She pulled off the PT-helmet, yawned delicately and sat relaxed for a minute, smirking reminiscently into the vision-tank.

"What I call a really profitable mission!" she informed the vision-tank. "Not a slip anywhere either—and just think how tame it all started out!"

She thought about that for a moment. The silver eyes closed slowly; and opened again.

"It's no particular wonder," she remarked, "that Central's picked me for a Five-Agent job—after only five missions! When you get right down to it, you can't beat a Lannai brain!"

The hundred thousand friendly points of light in the vision-tank applauded her silently. Pagadan smiled at them. In the middle of the smile her eyes closed once more—and this time, they stayed close. Her head began to droop forward.

Then she sat up with a start.

"Hey," she said in drowsy indignation, "what's all this?"

"Sleepy gas," the *Viper's* voice returned. "If you're headed for another job, you're going to sleep all the way to Jeltad. You need your rest."

"That's a whole week!" Pagadan protested. But though she could not remember being transported there, she was in her somno-cabin by then, and flat on her back. Pillows were just being shoved under her head; and lights were going out all over the ship.

"You big, tricky bum!" she muttered. "I'll dismantle your reflexes yet!"

There was no answer to that grim threat; but she couldn't have heard it anyway. A week was due to pass before Zone Agent Pagadan would be permitted to become aware of her surroundings again.

Meanwhile, a dim hum had begun to grow throughout the *Viper's* giant body. Simultaneously, in the darkened and deserted control room, a bright blue spark started climbing steadily up the velocity indicator.

The humming rose suddenly to a howl, thinned out and became inaudible.

The spark stood gleaming steadily then at a point just below the line marked "Emergency."

Space had flattened out before the *Viper* — she was homeward-bound with another mission accomplished.

She began to travel—

THE END

PHILOSOPHICAL CORPS

BY E. B. COLE

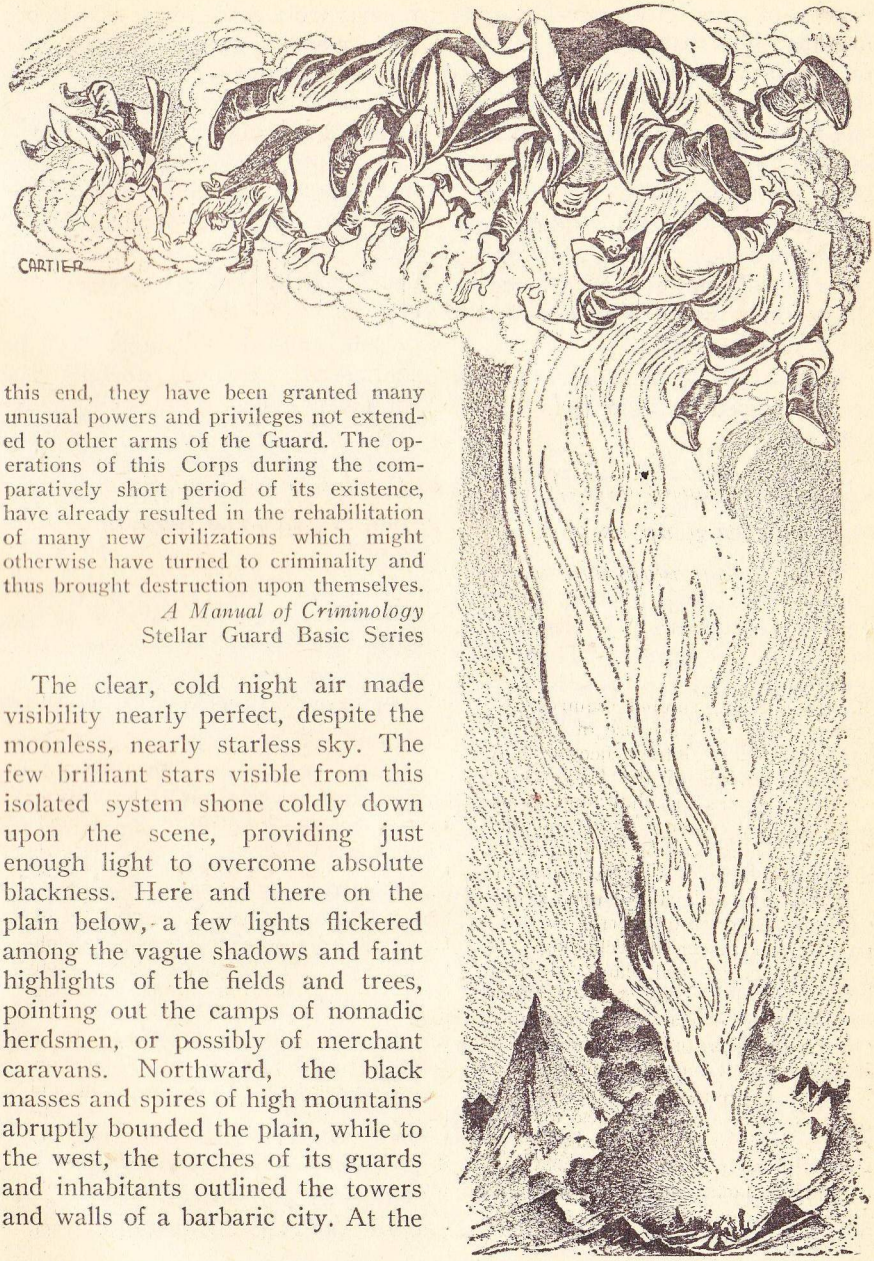
It can be quite a trick to prevent a bunch of swindlers from setting up as gods — and even more of a trick to get them out again without anyone knowing they were there!

Illustrated by Cartier

The "Degrader" criminal requires specialized handling, not because of any superior technique or intelligence he may possess, but because of the far-reaching implications of his peculiar operations. Essentially, this criminal is a smuggler and a slave trader, who preys upon undeveloped or primitive planets, much as the ancient "Blackbirder" preyed upon primitive nations or tribes on Terra.

Armed with advanced technology, he lands on an undeveloped planet. He then seeks out a barbaric city-state or nation of considerable power and importance, and by use of his weapons and other technical equipment, establishes himself as a deity. Once established, he embarks this nation on a program of conquest and pillage, drawing upon its loot for slaves, raw materials, precious stones and metals, as well as for artifacts. The slaves, of course, are used in various underworld activities, while much of the materiel finds its way through devious channels into normal, noncriminal society.

The usual methods of detection and capture would serve to apprehend this type of criminal, but the psychological and theological effects he leaves behind, require action by specialized personnel. For this reason, the Philosophical Corps was activated in the Stellar Guard. Originally, this Corps was a section of the Criminal Apprehension Corps, and followed upon the heels of the regular Criminal Apprehension Groups, operating to correct degrader influences after routine arrest had been accomplished. More recently, however, the Corps has become an arm of the service in its own right, and has been charged with the duty of observing undeveloped planets, arresting any degraders met with, in as unobtrusive a manner as possible, and finally, of correcting any ill effects left either by the criminals or by their own activities. To



this end, they have been granted many unusual powers and privileges not extended to other arms of the Guard. The operations of this Corps during the comparatively short period of its existence, have already resulted in the rehabilitation of many new civilizations which might otherwise have turned to criminality and thus brought destruction upon themselves.

A Manual of Criminology
Stellar Guard Basic Series

The clear, cold night air made visibility nearly perfect, despite the moonless, nearly starless sky. The few brilliant stars visible from this isolated system shone coldly down upon the scene, providing just enough light to overcome absolute blackness. Here and there on the plain below, a few lights flickered among the vague shadows and faint highlights of the fields and trees, pointing out the camps of nomadic herdsmen, or possibly of merchant caravans. Northward, the black masses and spires of high mountains abruptly bounded the plain, while to the west, the torches of its guards and inhabitants outlined the towers and walls of a barbaric city. At the

center of this city, enveloped in brighter light than the rest, and the focal point of its traffic, stood a massive building. Huge, heavily braced and flat topped, it squatted, dominating the lesser buildings about it as a giant among pygmies.

From the top of this building, rose an orange ball. Dully glowing, it floated lazily upward, then arced to the north, to finally disappear beyond the mountain spires.

On the hillside, an observer of this scene lowered his binoculars with a sigh.

"Well, sergeant," he remarked, "guess that settles it. We've hit another infected planet."

Dave Wells, Intelligence Technician First Class, nodded, his eyes on his instruments. "Looks like it, Mr. Dale," he agreed. "These people won't develop gravity-driven ships of their own for another five or ten thousand years." He turned. "Got contact, Jack?" he called.

"Hold it a minute," a voice from the blackness behind them requested. "Message coming in."

Dale and Wells stepped through the blackout field into the cave they had hollowed out for a base. The glare of light inside made them blink as they approached the communicator. Sergeant Owens was just picking up his microphone.

"Roger. Three more," he said, then turned to face the Chief Philosopher.

"The major says the only evidence we lack is a grav ship. He has reports from three teams beside our own, which indicate degrader type activity from our area. These, coupled with our reports of heavily loaded incoming traffic and practically empty caravans going out, plus that temple of theirs, indicate our city to be degrader dominated. We are to enter and scout on open schedule. Further, you are granted discretion."

Dale nodded. "Thought so," he commented, turning toward the equipment pile. "Oh, well, here's where we go to work." He commenced sorting items of equipment. "Wells," he inquired, "what was your azimuth and altitude on that ship?"

Sergeant Wells looked up from his plotting board. "I make it twelve point four six at ten thousand, sir," he replied.

"Good." Dale consulted his wristchron. "Owens, report a grav leaving the temple at eight point four two hours relative. It rose to altitude ten thousand meters, departing on course one two point four six, planetary true. It had ray and material screens energized. Velocity was approximately six hundred meters per sec. No city screen reaction." He paused. "That should tie our situation down tight. Owens, you and Daws will hold down communication. Bowman and Miller will act as base security. Wells and Isaacs will go in with me. We'll hold open sked with you per orders. Keep it recorded and shoot it along to Group."

Wells and Isaacs joined him at the equipment pile, rapidly sorting out items relating to their specialties. A few minutes later, the three men were dressed as natives of the region. They walked out of the cave, closing their eyes for a few minutes before going through the screen, then putting on their night viewers. Bowman was already standing outside on guard.

"Good luck," he said, then added, "Procyon."

"Cerberus," responded Dale.

Isaacs grinned. "Cerberus for a countersign. Any significance, sir?"

"Doubt it," Dale told him. "Just popped into my head." He turned to Wells. "Where were those bandit traces you reported?"

"South a couple of kilos. Spotted some bodies."

"Arrows?"

"Couple. Rest were hand-to-hand. The local boys play rough."

"I see." Dale fingered his chin. "Guess we'd better go down that way. I'd like to meet some of those rough boys. We'll use levitators. Lead off, Wells."

Wells nodded, touched his belt, then rose a few meters above the ground and sped southward, the others following him. Shortly, he eased to a stop and settled to the ground, followed by Dale. Isaacs snapped to a halt as though he had hit a wall, then in a flash, stood beside Dale and Wells.

"What the heck!" Dale was surprised. "Isaacs, you using a null?"

The personal mass nullifiers were handy, of course, but a man couldn't keep them turned on all the time, due to their power drain. With their four kilograms of intrinsic mass and their considerable bulk, they were not easy to conceal. It was seldom that Philo men carried them when in native costume.

"Yes, sir. I'm big and skinny enough to hide it. Had an idea it might come in handy."

"Well, it's a bit unusual, but you're the man's got to fight it if we get into a jam. With your other equipment, you must feel like a freighter."

"So, I can turn on the null once in a while to take a rest," grinned Isaacs. "The thing can pay its own freight, I think."

"Could be." Dale dismissed the subject. "Wonder where our boy friends would be."

Wells looked around. "I'm pretty sure they sprung their ambush from that thicket," he mused. "Let's see what my sniffer says."

He took a small instrument from his garments as he walked toward the bodies.

"Phoo!" he muttered disgustedly. "Doesn't take a spectroanalyzer to tell these characters've been lying around for a while. Hope I can get a decent reading."

He focused the instrument on an arrowshaft, making various settings, and noting the resultant readings. Finally, he straightened and returned

to the others.

"O.K.," he commented. "I think I can trail the guy that fired that arrow."

He clamped the analyzer to his levitator, making the necessary connections, then rose from the ground. Dale and Isaacs followed him as he made for the clump of trees he had previously indicated. Once in the thicket, Wells circled, tried a couple of dead-end leads, then set out on a straight course. Presently, they came to an abandoned camp site. Once more, Wells circled.

"Looks as though this one is fresh," he remarked. "Guess we're on the right trail."

"Good deal," Dale told him. "Let's get on. When you get into close range, stop. I want to look these boys over before we meet them."

They continued, going into the hills now. After an hour or so of trailing, Wells halted.

"We're just out of visual range now, sir," he reported. "I'm pretty sure they're somewhere in that wood." He pointed.

The three guardsmen touched their levitators, gaining altitude. At five hundred meters, Dale stopped.

"Good enough," he said. "Now we can look them over. Better cut out visibility. "He made the necessary adjustments to his protector shield, causing incident light to refract around him, leaving him practically invisible to the unaided eye. The two sergeants followed suit.

Below, the bandit camp was plain to be seen in the three-view screens. Riding and draft animals were picketed within easy distance of eight men who lay asleep, wrapped in their cloaks. Two more men walked guard, circling the small camp at intervals. Not far from the picketed animals was a neatly stacked pile of goods. Dale examined the camp layout.

"Well set up," he commented approvingly. "These boys are careful and smart." He turned to Isaacs. "Think you can nail both guards with a hypno?"

"Believe so, sir. You'll want to cut in when I have them?"

"Yes. I think all three of us should be in on it."

"Roger." Isaacs moved to line the guards up in his hypnotizer beam.

As Dale and Wells adjusted the thin mentacom bands on their heads, a confused jumble of thoughts broke in on them. A camp scene—across the fire, a woman grinding grain—running through this, a scrambled scene of battle— Suddenly, nothing. Isaacs had triggered his projector.

Dale touched a control. "Hear me!" he thought forcefully. "What manner of men are you that you prey upon your fellows?"

Slowly, there was dragged out a familiar tale to the guardsmen. These men were escaped slaves. Four of them had managed to escape from the city, and, by waylaying caravans, had freed and recruited the others. Members of various tribes from the southeast, all of them had been cap-

tured by Atakaran slave raiders. Eventually, they intended to return to their own countries, but the trade of banditry, once forced upon them, had become attractive and profitable. Both men were a little vague as to when they would actually start the journey back to their homes.

Dale held up a hand, fingers curved in the ancient "On Target" signal. Isaacs nodded, his hypno still trained on the two sentries. Dale continued his mental conversation.

"You both know, of course, that the day of capture will come?"

The men below readily agreed that it was inevitable. Intellectually, they knew the statement to be correct. There were reservations, however. Deep in their minds, clung the age-old thought, "It happens to others, but it can't happen to me."

Slowly, Dale shook his head. "No, it always happens—to every man who defies authority. In your case, however, I may be able to offer help. In the morning, three strangers will come to you. They will be friends. Listen to them."

He drew his fingers across his throat, and Isaacs promptly cut off the beam. The three removed their mentacoms, and watched the scene below.

The two sentries were gazing about anxiously, exclaiming to each other. After a few minutes of futile conjecture and equally futile search, they awakened their comrades. An excited discussion followed, punctuated by many gestures.

Dale signaled Wells and Isaacs close. "I think these ten will come in handy," he told them. "We'll make personal contact with them in the morning, and see what develops. However it turns out, they can teach us a lot about the customs of the region."

Isaacs was looking down at the camp. "Suppose there's any chance of this being a setup?"

"There's always that chance," Dale told him. "I don't think we've been detected, but— You didn't notice anything on the hypno, did you?"

"No, sir. I just have a nasty habit of dreaming up all the dirty tricks I can think of, and then expecting the other guy to try them out on me."

"Best habit a Security Tech can have," Dale smiled. "Better take a thorough check on the layout just in case." He hesitated. "What do you think, Wells?"

Wells gazed thoughtfully down. "I'm not so certain about this, either," he muttered. "They're putting on a good act, if it is an act, but that's a darn well-arranged camp, and they've got one heck of a big pile of stuff down there." He took his spectroanalyzer from his garments, focusing it. Minutes passed. The analyzer was replaced by a radiation detector, then a hypnotizer beam was brought into brief play. Finally, he looked up, replacing his instruments.

"Lots of precious metal and stones, but I can't get any trace of modern type alloys," he reported.

"No trace of unusual radiation, and if they've got screens up, they're the first indetectable screens I've ever met. Far's I'm concerned, they're clean."

"Good enough." Dale was satisfied. "Let's catch a cat nap till daybreak."

They settled to earth, seeking out a nearby thicket to make temporary camp. As the other two settled for sleep, Dale called Owens, giving him a report to relay to Group.

As Owens leaned back after sending off his report, Security Technician Miller looked at him questioningly.

"Look, Sarge. It may sound like a fool question, but suppose those people weren't humanoid. How would we make contact?"

Owens turned. "Simple," he shrugged. "This team wouldn't. Just before you joined us, we were at point and had to call in Team Four to take over, 'cause we'd hit a bunch of Saurians. You see, the teams are made up of all the known types of intelligent life. Since this is a humanoid world, we'd have to handle contact regardless of who spotted the degrader focus."

Miller nodded thoughtfully. "I see," he commented. "But how about the degraders themselves?" Will they necessarily be humanoid?"

"Definitely not." Owens shook his head emphatically. "They may be a mixture of anything in the galaxy. Last bunch we pulled in were of six different types. A Cheroid from Arcturus Eighteen was running the gang. He had some humanoids—terrans, at that—a few Saurians from Aldebaran Ten, an Apian and a flock of Centaurs. We may run into any form of life in the book here, but the natives are humanoid, so the rest of Group won't show themselves. It's our baby."

"Thanks," commented Miller. "They put me on orders out of Patrol so fast I haven't caught my breath yet. I'm having to learn this Philo business by ear."

"You'll get it," Owens assured him. "Lots of us came in with no warning, especially since Philo started expanding under this new setup. Come to think of it, Mr. Dale started in Philo as a replacement Security Tech."

"Him?" Miller was startled. "I thought he was a degree man."

Daws raised himself on one elbow. "Hah!" he snorted. "Warrant Philosophers with degrees just don't happen. Good grief, with this new Corps project, a degree man with Mr. Dale's ability and training would be a major at least. Nope, the chief was a recruit during the Osirian row, and hit every grade in between."

"Most of 'em in Criminal Apprehension," put in Owens. "Now, he's just about due for a commission. We'll see him in command of a group before long."

"Then who takes over this team?" Daws was curious.

Bowman spoke from the cave entrance. "Wells and Isaacs are both up

for warrant. Could be either of them."

"Doubt it." Owens was skeptical. "They'll both probably transfer, and we'll get a chief from some place else."

"How about you, Sarge?" queried Miller. "I don't want to be nosey, but I'd like to know how the chances are for promotion."

"Well, I'm up for Master," Owens told him. "Think I passed the exams O.K. Since the Corps took over its own investigation and apprehension, the ratings are wide open. Right now, there's just about no limit if a guy knows his stuff and does it."

Bowman broke into the conversation again. "Hey," he called suddenly, "their ship's coming back in."

"Get an azimuth and altitude quick!" yelled Owens. He spun around to the communicator controls, grabbing his microphone as he turned. "Brother," he breathed, "bet this is their base for sure. Daws, you get the chief on the portable. I'm going to call Group."

"What a break!" exulted Daws as he seized his mike. "Three calling chief, Three calling—"

Dale snapped to sudden wakefulness. He quickly answered Daws' call, then listened to the report.

"Good," he snapped out. "Group can take them out next time they lift. Meanwhile, tell them we'll go in soon as possible and start cleaning up when the ship leaves."

He awakened Wells and Isaacs. Since the clean-up was to be started soon, new plans would have to be made. Scouting didn't seem as important now as positive action. The three men would have to insinuate themselves into the city with very little delay. Checks would have to be made to locate any remaining degraders if such existed. The criminal operations undoubtedly present in the civil government would have to be corrected. The degrader form of religion would have to be eliminated. Then there were other things to be considered.

As they talked, the sun rose. Sweeping darkness before it, the star glared down—huge, brilliant, dominating. Sharp, harsh shadows and blinding reflections replaced the vagueness of the night. This was a young world—satellite to a young, active star. Quite conceivably, thought Dale, this was its first civilization. Equally conceivably, this new civilization might survive—might grow and mature in a normal manner and emerge, triumphantly successful at the first attempt, rather than coming to a dead, sterile end, as many civilizations, blighted by premature, unlawful contact with more advanced peoples, had done.

The three guardsmen walked out of their concealing thicket, heading toward the refugee camp. Despite the speeded up program, Dale felt that these men might have their uses. In fact, if the idea in the back of his head materialized, they would be invaluable. Besides, Corps regulations forbade broken promises to primi-

tives. This contact was necessary in any event.

As they approached the forest, a voice cried out a challenge. Dale stopped, raising his hands, palms outward. The voice said more, ending on a questioning note. Dale turned.

"Language sound familiar?" he queried. "He wants to know who we are and where we came from."

"Sounds a little like primitive Osirian, sir," replied Wells, who hadn't put on his mentacom. "We shouldn't have too much trouble with it if we want to learn vocally."

A man stepped from the trees, bow leveled.

"Who are you and where do you come from?" he repeated.

"We are three strangers from a far country," replied Dale. "Last night two of your number had word concerning us."

"You are unarmed." It was a statement, rather than a question.

Dale smiled. "We have no bows or swords," he evaded.

The man seemed satisfied. "Come," he instructed them, gesturing toward the wood with his bow. "Lanko, our leader, wants to speak with you."

The three walked into the wood ahead of the sentry, coming to the bandit camp site. The nine escaped slaves, seated about on the ground, eyed them as they approached. One arose.

"I am Lanko," he announced. "Are you the three strangers Musa and Dano told us of?"

"We are." Dale stepped forward. "Musa and Dano were contacted last night by us."

"How?"

"By instruments we use for talking at a distance. We have certain tools that are strange to you."

One of the men in the group seized his bow. "I don't think we should trust these three, Lanko," he growled. "How do we know they aren't spies from the priests of Atakar?"

Dale laughed. "Do you think the priests of Atakar would trouble to send spies to you?" He shook his head. "No. They would merely send soldiers to bring you back to captivity."

The man was unconvinced. "I still say shoot first and ask questions later," he told the leader.

Dale spread his hands. "You can do that easily enough," he acknowledged, "but it would do little good. If the ones in Atakar know your whereabouts, shooting us would avail you nothing. If they don't, it should be obvious that we have told them nothing of your presence, and are unlikely to be spies of theirs."

The leader nodded. "Enough, Dasnor. This man speaks truth, and we can certainly use any help we may get." He gestured. "Be seated, strangers, and tell us why you come."

Another of the group, who had been sitting with a puzzled expression, suddenly spoke. "How is it," he inquired, "that you speak my native language well, and yet my companions, who speak no Jogurthian,

understand you?"

The leader turned to him. "He was speaking plainly in Karthanese," he stated.

"No," persisted the other, "I heard him as plainly as you, and the language he was using was Jogurthian."

Dale held up his hands. "You are both right," he told them, "and both wrong. I was speaking no language either of you ever heard, but we have a tool which allows us to speak to all men in their native tongues." He paused, then continued. "We three have come to you, both to give and to receive help. From our own country have come thieves. Dangerous beings, who have gone among the priests, and into the temple of Atakar, and who have corrupted the people. It is our duty to take these thieves and to undo the damage they have caused. In this, you can help us. By our efforts, we can give you a free land to live in. In that, we can help you."

The men sat up. Lanko's face clouded. "How can a handful of fugitives and three unarmed strangers overcome the night of Atakar?" he demanded.

"We have companions who will deal with the might of Atakar," Dale told him. "Our duty is to work from within the city. You know the customs of this world, and can help us in this."

Lanko stroked his short beard. "It is possible that we could enter the city as traders," he mused. "Never before, have we dared enter Atakar

itself, but always we have gone to another city." He looked toward the pile of goods. "It is almost time for us to trade somewhere, though, and —maybe this is the way to end this thievish existence of ours and become free men once more." He held out his hands. "Stranger, if you can prove your words, we will work with you."

"Very well." Dale stood again. "We have many things to talk about."

The three guardsmen rapidly explained the Universal Federation to their prospective recruits. At first, incredulous that the tiny points of light in the sky might contain worlds as great and even greater than their own, the ten gradually came to realize the scope of the Galaxy. Their crude and degrader-distorted philosophy was replaced by positive knowledge of the many civilized worlds in space. Memory pictures projected by the three with the aid of the hypnotizer ray gave them actual views of advanced civilization, and of degrader damage on other worlds. Swiftly, though with care that mental damage did not result, they were given a full view of galactic civilization.

Finally, came the last stage of their indoctrination. The shadows were growing long, and darkness was slowly settling over the hills when Dale stretched and faced the men.

"Now, gentlemen," he said, "you all know who we are, and why we are here. You know many things that very few, and possibly none of the people of your planet will know for thousands of years. Those of you who are still listening also know that many of your people are incapable of receiving this knowledge without suffering mental damage. Further, you know the peculiar terms of service the Stellar Guard imposes. You know, for example, that no guardsman can associate with any but other guardsmen while on a primitive or undeveloped planet. During your time on this world, you will have no close friends—no wife—no children. You will have to observe a good many other stringent regulations. It is a hard life, but a satisfying one, and after retirement, the reward is high." He paused.

"So," he continued, "we come to the parting of the ways. Those of you who wish to take service as Stellar Guard recruits are more than welcome to do so now. Those of you who do not wish to take such service, have that choice. If you do not wish to take service, all memory of this day and of your comrades who have enrolled in the Guard will be taken from you by the same instruments that gave you this new knowledge. For this memory will be substituted the memory of a normal escape from the region of Atakar. You will be returned to your former homes together with those five who were not strong enough mentally to accept the information we had to give. From that time, you and they will be free to live normal lives.

Please think this over well." He sat down.

Lanko sat thinking for a minute. Finally, he lifted his head. "Three years ago," he said, "I was counted a rich man. I had flocks and herds, with many men to watch them. Then, I was happy with my life. One day, the slave raiders came." He shook his head. "That should never happen again on this world. By this time, my flocks are scattered anyway, and this is opportunity. I can't speak for the others, but I will take the oath gladly."

Another man shook his head. "I'm not so sure," he remarked. "I was never rich, but I had a good life. I have my trade at which I am skilled." He stopped, then continued. "Then, too, there was a woman. She may be gone, but there are others." Again, he stopped, collecting his thoughts. "Thirty years," he continued, "is a long time to serve in loneliness. I would rather turn back to the old life with these other five." He gestured to the five men who had been placed in hypnotic sleep to prevent injury to their minds during the indoctrination process.

Dale nodded. "We will return you to your home," he stated.

At length, the decisions were made. Lanko and Banasel, the Jogurthian, decided to take the oath and enter service with the Guard. The other three of the acceptable men declined for their own reasons. A call from Dale to base brought the rest of the team, and after suitable treatment with the hypnotizer ray, the eight men were delivered to their respective homes under the care of Bowman and Daws.

As the tiny flier lifted, Lanko turned to Dale. "I hate to see them go," he said. "They were good companions."

Dale placed his hand on the man's shoulder. "You can never again share their lives," he told him, "but there is nothing to prevent you from guarding them from harm, and helping them to prosper."

During the days that followed, educator tapes and hypnotizer rays were utilized to their fullest extent, and the camp, now moved underground, became a schoolroom.

A patrol of Atakaran soldiery was repulsed from the area, with positive memories of a bitter struggle with a bandit group who had to be slaughtered to the last man. Returning, they regaled their comrades in the barrack and in the wine shops with tales of the day-long battle with ten of the toughest bandits ever encountered. Finally, it got beyond the point of endurance, and members of that particular patrol found themselves in uncontested possession of any room or wine shop they happened to enter. So, the incident was forgotten.

At last, Dale was satisfied. His two recruits were well grounded in the advanced science and techniques of the Philosophical Corps. Wells and Isaacs had slipped into the city, choosing a time when the degrader ship was away, and using the light

refractive qualities of their shields to evade the guards. Group had called, informing them that the degrader ship had been intercepted well out of sight of the city, and captured. Now, the team was ready to commence its clean-up operations within the city. Once more, the men donned native clothing.

The goods and animals were formed into a small caravan, which made its slow way toward Atakar. Entering the city, they made their way to the merchants' quarter, where they joined Wells and Isaacs at a small caravansery.

The following day, Wells and Lanko slipped out to the street, making their way to the temple. As they gained the street, Lanko dodged back to avoid a denkem, the illtempered beast of burden. The driver made a surly remark as the beast, missing Lanko, attempted to take a bite out of Wells' shoulder. As the animal swaggered past, Wells smiled.

"That is one of the minor advantages we have, Lanko," he remarked. "Our body shields, remember?"

"I forgot, sergeant," admitted Lanko.

"Don't," cautioned Wells. "The best possible weapon you can have is a reputation for complete fearlessness. People will follow a fearless man, even though they don't fully agree with his philosophy."

As they approached the temple, the streets widened slightly. Crowds idled before the shops. Traders from the far places of the planet rubbed shoulders with officers and soldiers of the Imperial armies. Cries of vendors mingled with the sound of bargaining. Artisans slipped through the streets, bound on their own missions. An occasional cry of "Make way!" heralded the approach of a gayly decorated noble's chariot. The two men slipped through the crowd, and mounted the steps of the temple of Senemanos, the degrader.

Both of them knew that somewhere in this huge temple, a band of degraders lurked. Desperate beings of many differing races, these degraders had one thing in common: They were unalterably opposed to orderly civilization. Their law of living was summed up in the statement, "What I want, I take." To their criminal minds, the psychiatric treatment awaiting them at Aldebaran Base was equivalent to a horrifying death. To them, the idea of becoming normal citizens of their various worlds was thoroughly repugnant, and they would fight to the last to prevent such a terrible thing from happening to them. However, the capture or elimination of these beings was absolutely essential to the health of the planet, and these two guardsmen intended to draw them from their concealment as soon as possible.

As the two men reached the top step of the temple, Wells stepped aside, speaking into his tiny microphone. "This is Wells," he announced softly. "We are at station."

Quickly, Lanko raised his mentacom to full power. "O, sinful men of

Atakar, hear me!" he cried, stretching his arms wide. "I come among you to call you back to the paths of right—"

As he talked, Wells slid back into the shadowed columns of the temple, watching for anyone who might come from the interior. Once, to the left, he saw Isaacs sliding from column to column. Suddenly, a rain of stones struck the temple steps. Wells glanced back. Lanko was standing, arms folded, head up. Stones were bounding from his body shield. A slight smile played about his lips. Dale's voice came over the communicator.

"How're you doing, Lanko?"

"More fun than a jewel caravan," came the low-toned answer.

"Good man," applauded Isaacs.

Lanko stretched out his arms again. "Cease your play, O foolish ones," he roared. "Do you imagine your puny stones can harm the messenger of the Great One, when your false gods cower in fear behind me?"

"Oh, brother," came Miller's voice, "that should draw fire."

From the temple entrance, stepped a huge figure, dragging a mobile blaster. The capriform, Senemanos, had decided to come out fighting. As he lifted the projector, he was caught in the beams of nine paralyzer rays. His shield glowed redly, then rapidly ran up the spectrum as it overloaded. The giant figure slumped to the stones.

"One," said Owens.

"Into the temple," ordered Dale. "We've got to see if there are any more."

Inside, a group of priests came rushing at the entering men. Isaacs swept his paralyzer across them. Silently, the entire group slid to the pavement. Their weapons clattered on the stones, causing echoes to ring about the huge room.

"No score," grunted the security sergeant. "They must be holed up."

As Isaacs started forward once more, his shield glowed fiercely. Almost instantly, he flashed into motion, sweeping up and to the right. The glow faded as instantaneously as it had come.

"Knew that null would pay off," he exulted.

Beams from the rest of the team quickly snapped about the temple, picking out a number of shield flares at the back of the altar. There was a dark mass of equipment, lighted only by the flares of the shields of the varied beings grouped about it. One many-armed creature was training the projector.

"Keep moving!" ordered Dale. "That thing's too hot for our shields. Shift to dis, and concentrate your fire to blind the pointer."

A rumble of falling masonry spoke of Isaacs' passage through the temple. His blaster at full disintegration power, he was searching for the power unit. The rest of the team dispersed, dashing from side to side in the great temple, their fire concentrated on the degrader shield. Falling columns and portions of the dec-

oration within the huge inclosure spoke of the blinded pointer's efforts to locate them with his blaster beam.

The rumble of Isaacs' passage died down. Suddenly, the shield flare about the heavy blaster died, to be replaced by a blinding flare of released energy. The degrader group scattered, blown about like thistledown. As the concussion wave expanded, the walls of the temple seemed to expand, then, slowly, the whole structure started to collapse.

Isaacs' voice blasted over the communicators. "Out!" he shouted. "She's going to blow."

The team was already on its way. At the shout, the members speeded up their drives, scooping up the paralyzed form of Senemanos as they went. At a command from Dale, Lanko broke off his harangue and joined the group in its flight to high altitude. A terrific concussion wave bounced them about, as an immense column of flame shot up toward the heavens. It rose to tremendous heights, then mushroomed out. A rain of flaming debris showered the stricken city. Terrified crowds struggled in the streets, their only thought being flight. Fires were blossoming out on all sides, blocking avenues of escape, and threatening the panic-stricken mob with total destruction. Even at the altitude the guardsmen had sought, the shouts and screams were plain to be heard.

"Three to Group," Dale called. "Can you give us condensation?"

"This is Group," came a quick answer. "Return to ship. We are condensing moisture up to atmospheric limit. What happened?"

"Old-fashioned power pile," Isaacs broke in. "When I tampered with its shield, it started running wild. The backlash, when the projector blew, set it off good. No time to quench or readjust, so I got out of there."

"Roger." Group responded. "Here's your storm."

The rain started with a furious rush. A cold wind driving, it came in sheets, driving at the flames of the city, and smothering them with solid masses of water. Quickly, the flames blacked out, and the smoking ruins of the city bowed to the fury of the flash storm. The rain ceased—to be followed by a dry wind, which blew the smoke of the ruins aside. Slowly, order began to replace panic, as the city populace waded through the flooded streets, each seeking its own.

Team Three, still towing the unconscious form of the degrader, Senemanos, swept into the entry lock of the cruiser. As he entered the ship, Dale stopped, snapping a salute aft in the traditional gesture, then saluted the Duty Officer.

"Request permission to come aboard, sir."

"Permission granted, Mr. Dale." The D.O. returned the salute. "Report to Major Jamieson in Control."

Slowly shaking his head, Dale walked to the control blister. This mission had been wound up the hard way. One whole city practically scratched. People killed and injured

by the hundreds. A disturbance that would remain in the history of the planet for thousands of years. Definitely sloppy, he told himself.

He walked into control, reported, then stood at attention.

At his desk, Major Jamieson fingered some reports for a moment.

Oh, oh, thought Dale. *Close the door softly as you leave—Private Dale.*

The group commander came forward, hand outstretched. "At ease, Mr. Dale, and congratulations. You got the big prize."

"Con . . . gratulations, sir?" Dale almost stuttered.

"Definitely. You just brought in one of the big ones. We have a flash from Center, giving us a psycho report on some of those babies we captured. This Senemanos of yours was running one of the largest gangs on record, right from that temple you just wrecked. The place was so well protected that he could have slugged it out with a squadron if you hadn't sneaked inside his main screen and caught him off balance. Center thinks that breaking this gang will just about clean up our sector."

"But wrecking that temple was an error, sir. If I had done a more thorough job of scouting—"

"You'd have been chewed up and spit out," interrupted Jamieson. "You just keep on making errors like that one." He hesitated. "Oh, yes," he added, "you'll have to remain here on detached for a while, captain."

"Yes, sir. I rather expected . . . CAPTAIN!" Dale almost shouted the last word.

"Captain." repeated the group commander firmly. "Here are your orders. You can study them over, and report back in the morning. Dismissed."

An interruption to the rule of the sea kings of Konassa took place during the Tenth Century, when the mysterious and short-lived Atakaran Empire was suddenly founded. Located near the northern boundary of the plains of Galankar, the city of Atakar was the capitol of a thriving but minor agricultural nation, under the overlordship of the Konassan king. A dispute over tribute led to a short war, which ended unexpectedly with the death of Manato II, of Konassa and the plunder and burning of his city. Following the sack of Konassa, Atakar systematically brought the entire Galanian Empire under its sway, crushing all opposition with apparent ease. No explanation of the sudden and apparently overwhelming military power of this hitherto unwarlike nation has ever been found.

This strange and unexplained hiatus in the history of the Konassan sea kings was brought to an abrupt end with the cataclysmic destruction of the city of Atakar. No satisfactory explanation of the catastrophe has ever been proposed, but the Atakaran Empire ceased to be as suddenly and mysteriously as it had begun.

Freed of its serfdom to Atakar, Konassa came once again into its own. Its favorable location on the Gulf of Manapor, as well as its easy access to the fertile plains, led naturally—

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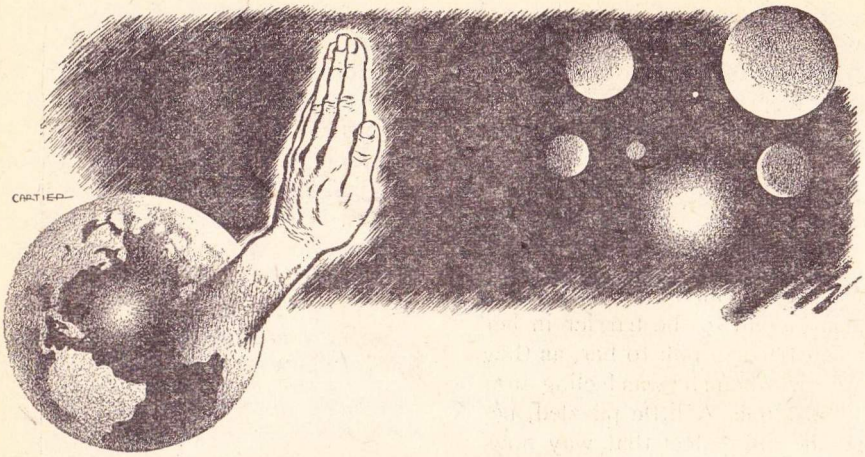
Katakon's *Sketches of Antiquity*

THE END



"...OF THE PEOPLE..."

BY MORTON KLASS

The President of Earth knew he was speaking to a completely sympathetic Council, though no one else on Earth realized the true sincerity of that sympathy!

Illustrated by Cartier

The wide, white portals swung open majestically. The stocky, gray-haired man who entered the council chamber appeared dwarfed and insignificant beneath the high, flaring doors, but his conservative business suit and battered brief case had about them an almost noticeable aura of quiet dignity and importance as he proceeded slowly down the long center aisle to the president's rostrum at the far end of the council chamber. With the inattention born of long experience, he made no sign that he was at all aware of the hushing of many voices, or the muted shuffling of feet as three hundred and forty-two councilors, representing all the peoples of the Earth, rose respectfully at the entrance of Leonard Underwood, President of Earth and chairman of its highest council.

Without changing his pace, Underwood mounted the rostrum and

stepped behind the bare, rectangular desk, turning to face the assembly of standing, silent councilors. Methodically, he opened the brief case and spread the sheaf of papers that were its contents before him on the great desk. He banged an ornate gavel once, lightly, and said in a tired but resonant voice: "In the name of Humanity, I declare the Council of Earth to be now in session, this fifteenth day of April, 1975."

A rustling sound of moving bodies rose up, then died away, as the members of the Council resumed their seats.

For the first time since he had entered the chamber, President Underwood failed to behave in his customary manner. Instead of relaxing into the comfortable armchair behind the desk and waiting for the first order of business for the day to be proposed, he remained standing, and his gaze traveled thoughtfully over the faces of the men and women before him.

A murmur of vague surprise sprang up and was swallowed by an attentive silence. President Underwood smiled and nervously adjusted the old-fashioned pince-nez he wore. Then he placed both hands, palms down, fingers outspread, upon the polished surface of the desk, and drew a deep, audible breath.

"Ladies and gentlemen, World Councilors, revered associates," he began, in a low, clear voice that could be heard in the farthest reaches of the gigantic chamber, "I, who have made all manner of political speeches under all possible conditions and in every conceivable place on Earth, find it extremely difficult to say what I am now about to say. Actually, what I am going to make will be more of a confession than a speech. Even that term is incorrect, but let it stand until I have finished.

"I know that your first reactions to what you will hear will be cries that I am mad, or suffering from a breakdown. Later will come shock, and finally, belief, but I know it would be foolish for me to hope that you will sit patiently until I have finished. Therefore, before I came here I arranged to have a cordon of World Guards placed around this chamber. No one will be permitted to leave or enter under any circumstances. I am armed, and will resist any effort to drag me from this rostrum before my speech is completed. I am sure you will hear me out — even if impatiently — when I promise that, once done, I will submit peaceably to whatever you wish, if it should prove that, through some fantastic error on my part, my conclusions are wrong."

Underwood waited unmovingly as a few of the councilors near the exit tried to leave and returned with startled verifications of his statement. The president raised one hand and, in obedience to long habit, the tumult stilled and the milling councilors went back to their seats.

"You know me as Leonard Un-

derwood," he resumed, "born in the city of New York of what was once the United States of America. School children the world over can recite glibly the tales of my early childhood; how my parents moved to Arizona when I was still an infant, the manner in which they died and how I was raised on a Navaho reservation. Countless articles have been written showing how my experiences during the Second World War and in the period from Hiroshima to 1955 laid the groundwork for my future efforts in the field of world government and peace on Earth. Some of you sitting before me now helped in the founding of the Omaha Movement, and all of you became acquainted with me during the period of the Great Reorganization.

"The first thing I want to tell you is that everything known to have happened to me before 1955 is utterly untrue. Leonard Underwood never existed before the day I appeared in Omaha as an itinerant laborer."

The uproar was louder this time, and flecked with uneasiness. The assemblage came to order quickly when President Underwood raised his hand; they were disturbed, but they did want to hear more.

"It is necessary for me to explain at this point that the Earth is not the only inhabited planet in the galaxy. There are a countless number of such worlds, and the peoples living on many of them have achieved higher civilizations than that of Earth. The secrets of space travel have been discovered, and a galactic federation of the more advanced races has been in existence for many eons.

"The Federation became aware of the fact that Earth had discovered atomic power and was using it. Ships were sent here to study this planet's degree of development, how soon Earthmen might be expected to perfect a space drive. The Federation likes to prepare well in advance for the admittance of a new member-world. By the way, some of those survey ships were noticed by humans and gave rise to the 'Flying Saucer' legends.

"The reports brought back were extremely adverse. Earth, it seemed, while technically in a high stage of development, was socially chaotic. Atomic power was being used, not as an aid to human comfort and betterment, but for purposes of war and destruction. The psychologists of the galaxy analyzed the findings of the observers and decided that there was a very good chance that humanity might not only destroy itself entirely, but ruin the surface of its planet for all other life forms. It was suggested, too, that if Earth, with its present poor development in the fields of entity relationships, were by some chance to avoid self-destruction and send its people to the stars, it might seriously endanger galactic peace.

"After these points, and others of a similar import, had been brought to the attention of the Federation, there arose a strong sentiment among the representatives of the

galactic peoples for the immolation of the human race. The supporters of this idea argued that humanity was both pathological and a menace. Destroy the present inhabitants of Earth, they suggested, and re-populate the planet with the excess inhabitants of some crowded, but more deserving, world."

Underwood paused, as if expecting some violent response. All unmoving, the councilors were sitting hunched forward in their seats, faces expressionless, all eyes focused on the countenance of the president.

Surprised that only the gentle susurrance of breathing noises broke the stillness of the council chamber, Underwood tried to calculate the thoughts of the men and women before him. All but two of the faces were completely impassive. Sergei Odintsov of the twenty-third World District looked worried and unhappy. Chien En-Lo of the ninety-fifth was smiling almost imperceptibly. But both of those reactions were to be expected.

Leonard Underwood sighed, and continued: "After much discussion, the Federation decided to wait before taking such a drastic step. For a period roughly equivalent to twenty Earth years, this solar system was to be quarantined. No member of the Federation was to come anywhere near this sun, or in any manner make its existence known to the people of this world.

"It was considered highly unlikely that Earth would acquire the art of interstellar, or even interplanetary transportation during this period. Wars might occur, probably would, but none of such magnitude as to permanently affect Earth's crust. At the end of this time, it was agreed, a further survey would be made and, on the facts then brought forth, a final decision made."

Underwood poured himself a glass of water from a cut glass carafé. As he drank, he noticed that Odintsov was dabbing at a perspiring brow, but the president resolutely avoided the other's eyes.

"My planet revolves around the star known to Earth astronomers as Canopus. My people are a highly advanced, gentle race, characterized by what might be called an acutely developed racial empathy. Earthmen—even deeply sensitive ones—might find it hard to believe that the entire population of a planet could be made uncomfortable by the knowledge that an alien race was destroying itself through its own immaturity, but the people of my world *were* made unhappy by such a situation. We were not constituted to sit idly by and allow such a thing to happen.

"The leaders of my world—we do not have a government in the human sense—met and decided to extend secret aid to Earth. Technically, I suppose this was going against the Federation edict, but, since Earth was not to know of the help it received, there would be no major galactic repercussions when the news

got out. Among higher civilizations, there is a different quality to the relationship between governors and governed than exists in even the best Earth systems. Basically, it might be described as a greater respect on both sides for the responsibility and judgment of the other. There is no punishment, in Earth's terms, no antagonisms. The thought of bowing to the other's will—but I am afraid I'm digressing rather pointlessly."

Underwood smiled at some private joke, as the delegates exhaled almost in unison, shifting uncomfortably in their upholstered seats.

"I was approached, as the individual most fitted for the job of helping humanity without its knowledge. My field is—well, the closest I can come to it on Earth's terms is, experimental history. I had done a great deal of field work on primitive worlds, and I must say I was intrigued by the novel aspects of the problem of Earth. My instructions were to proceed to Earth, give myself the character and background of a human, then help humanity to solve its problems in whatever manner I saw fit.

"Naturally, I could expect no assistance once I had arrived. I was not to contact my world unless I considered the situation hopeless and wished to be removed. I was to prepare to leave when the twenty-year period was up, since the Federation survey ships would be sure to discover my presence here.

"Twenty years on an alien planet might seem like a terribly long time to an Earthman, but my people are long-lived, compared to humans, and I have spent far longer periods doing my ordinary field experiments.

"There is no point in my going into just how I created the background of the person known as Leonard Underwood, or, for that matter, the principles of the wave-disrupter technique used to assume the appearance of the natives of a particular planet. I arrived, learned the language, the dominant mores, and the ramifications of the problems facing me. As you already know, in the spring of 1955, Leonard Underwood arrived in Omaha, an itinerant, self-taught laborer, prepared to do battle with a world divided against itself culturally, politically, linguistically and economically."

Underwood's voice took on a quality of softness as he gazed unseeingly across the vast, silent chamber.

"Those early days were the hardest, but they were the most exciting. Alone, though not for long, I preached the concepts of human unity, the need for peace, and the ways in which it could be achieved. Soon I was joined by Holliday"—Underwood nodded to the thin, white-haired councilor in the second row—"then Robbins, and then Zangwill came into the Movement. We built an organization which took in those of every creed and every shade

of political persuasion. I used all my knowledge of how to influence masses of people and how to predict and control events, but I do not know that I would have succeeded without the help of those three, or the others who flocked to the Movement.

"Once the ideas spread abroad, and chapters were formed by Odintsov in what was then Russia, Chien in China, Ordonez in South America, and by the rest of you in all your various homelands, I knew that we would eventually succeed. Even when the movement was outlawed by all the frightened governments of the world, we could not fail. Forgive me for running on this way; you all know as well as I of the tribulations of the Underground Years, but I learned to love Earth during that time, to actually consider myself a human.

"When we came out into the open in 1960, we couldn't be stopped. We had a united world behind us. I have not come to the most important part of my speech, so I don't want to waste time reviewing the last fifteen years, the period of the Great Reorganization. It is necessary, however, for me to sum up quickly what we have achieved.

"The present generation is growing up in a peaceful, rich world. One language, scientifically sound, flexible and euphonious, is replacing the myriad tongues of the past. The deserts and the barren wastes are flowering and, for the first time in human history, there is food enough for all. Science, freed from the shackles of language and national boundaries, is spurting ahead at an unbelievable pace. And we have only begun; there is so much more to do.

"The twenty years are almost up. I regretted having to leave this world and all of my friends here, but I knew the ship from my home planet would soon arrive. It isn't simple for a world president to disappear. I had made careful plans to fly from the world capitol here at Hawaii to South America. I would travel alone, in my private plane, as I've done many times before, only this time I was not going to arrive. There would be search parties, then a period of mourning, and the Earth would continue along without me. As I said, it was all planned—until Odintsov came to visit me two days ago.

"Sergei and I often relaxed over a game of chess. On this occasion he seemed disturbed about something. Suddenly, he informed me that he would not be present at the debate scheduled for next week on the Antarctica reforestation question, as he would have to fly to his home in Minsk to take care of some urgent personal business. Since I did not expect to be on Earth at the time of the debate, I was not too concerned with Sergei's excuses.

"Two hours after Odintsov had left, Chien En-Lo called to tell me that *he* would not be present at the debate. 'Urgent personal business in Hankow.' Perhaps I should have suspected before, but the whole thing

seems so wildly impossible!

"I checked the backgrounds of both Odintsov and Chien. Of course, I'd always known the broad outlines of their histories, but now I looked for those little, almost unnoticeable details—

"I also checked the background of every member of the Council of Earth, And then, ladies and gentlemen, I broke galactic silence, and put in a hurried call to the Galactic Federation!

"Because not one of you present in this council chamber today is a human being!

"I suppose it was presumptuous of my people to imagine they were the only ones sufficiently empathetic to be willing to flout the Federation's decision. But apparently your worlds were not only equally empathetic but equally presumptuous. It would be a tremendous understatement to say that the entire galaxy will reverberate when word of what has occurred on Earth leaks out.

"The Federation is now meeting in secret session to work out a means of handling this unparalleled situation, but we must not wait for their decision! Earth — *our* Earth — is in danger!

"When I informed Odintsov and Chien of the true state of affairs, Sergei strongly advised against my coming before you. He was afraid I might have been mistaken about a few of you, that there might be one or two true Earthmen present, and that we should wait for Federation confirmation of my findings.

"I am certain I can recognize the methods used by experimental historians to establish themselves on a primitive world. I am quite sure that everyone here is such an historian. In any case, the chance had to be taken.

"Do you realize the magnitude of the problem before us? If we had left in a body, as all-unknowingly we were preparing to, this planet would have been thrown into utter confusion. It is impossible to predict what the Federation's decision will be. They may even *order* us to return to our native worlds!

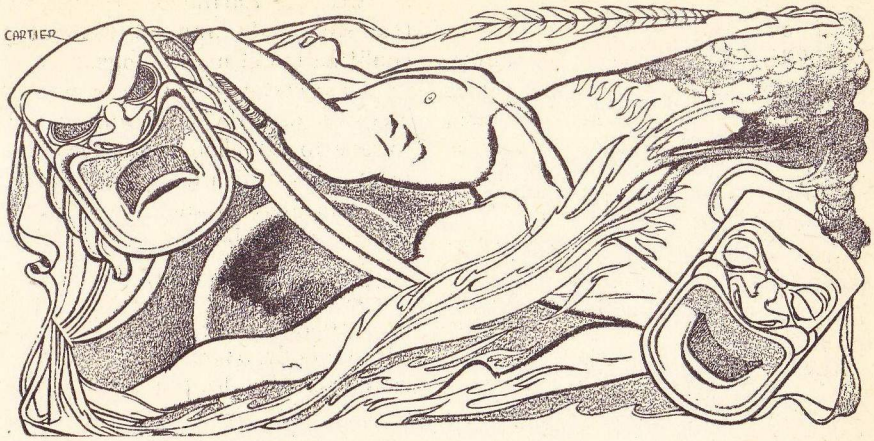
"We cannot permit this to happen. Earth must never suspect that her first world government was instituted by aliens, and her first representative body composed entirely of beings from space!

"We love Earth, all of us, and it is up to us, as Earth's highest governing body, to protect the people of this world. If need be, we must defy the Federation, and force the galaxy to accept *our* decision. After all, we represent Earth!

"And therefore, fellow Earthmen, as president, I call upon the Council of Earth, sitting assembled, to deliberate upon the greatest crisis we have ever faced in all our years of working together.

"Ladies and gentlemen, I am prepared to entertain a motion."

THE END



CASTING OFFICE

BY HENDERSON STARKE

***This is,** quite frankly, a fantasy. But it's such an intriguingly unpleasant little piece I thought it would be fun—*

Illustrated by Cartier

There were, literally, millions of casting offices and millions of reception rooms and millions of casting clerks, and, of course, millions and millions of clients waiting for assignments.

In one of the offices, there were five clients.

When the clerk's buzzer sounded, they hunched forward anxiously. If, after consulting his charts, he did not summon one of them, they settled back, their eyes still alertly following his every movement.

The sixth client materialized from the stage. He stepped down from the exit platform.

"Whew," he said, "that was a rough one." He walked over and signed the "Out" list which lay open on the clerk's desk. The clerk checked the signature against his

balance sheet, made an entry, and then laid his pencil aside.

"No more like the last one," the client said. "See if you can't get me a better one next time."

The clerk said: "I'll do my best. You want to go right out again?"

"Yeah. Might as well."

"O.K.," the clerk said. "There's a waiting list today. Sit down, please."

The client walked across the room and sat down.

"That was an awful role," he said.

One of the others, looking up, said, "Some bad, some good. Mostly bad, any more. It's getting worse, I think."

"How can we take it, if it gets worse, I want to know? It's ghastly enough, every living second of it, now." He looked up at the company's motto, *The Show Must Go On.*

"It's so bad, now," someone else said, "they won't even give us a script briefing, and that—"

The clerk caught a buzz on his board. The clients stopped talking and bent forward.

The clerk uncoded the request. He drew his list forward. He checked it quickly, running a pencil down the line of names.

"I got a short one," he told the waiting clients. "Anybody want it?"

One client stood up before the rest. "Extra pay?" he asked hopefully as he crossed to the desk.

"Routine. You want it?"

"Can't you give me a hint?"

The clerk shook his head. "Sorry. Yes or no?"

"I need the job."

"All right," the clerk said. "Let's see. I've got your pay record here, somewhere. Ah, yes. Here." He pulled it forward and scribbled a coded entry. "There. You ready?"

"Yes," the client said. He stepped up on the stage entrance platform.

The clerk watched the hands of his watch. His eyes narrowed intently. Then he pushed a button and the client vanished into the on-stage memory blackout.

"We keep busy, at least," one of the remaining clients said.

Another laughed harshly. "We keep moving, you mean. I've had six short ones straight."

"It's not fair," another said. "They ought to have to tell us the roles. There's a lot they couldn't get me for, I bet."

"It's the Author's fault. Why don't they write cheerful plays any more? What's wrong with them—that's what I'd like to know?"

The buzzer sounded again, and they all hunched forward, holding their breath.

The Author, smiling, entered the Director's office.

The Director looked up sternly from a stack of Critics' reports that spread over his desk. He frowned in the direction of the Author.

"Dear me," he said, "you've really no occasion to be smiling."

The Author clucked his tongue. "I thrive on criticism," he said. "And that I do not chose to heed it is a further testimonial to my already leg-

endary and notorious artistic integrity."

The Director shook his head sadly.

The Author laughed. "One of the basic canons of the fraternity: a hostile critic is an unmitigated ass. It's a defensive reaction, and its pronouncement follows the criticism as the night, the day. But, on the other hand, the friendly critic, although usually a man of innate sensibilities and superb perspicacity, has, in the present instance, been so overcome with the over-all artistic effect that he cannot discern those numerous minor flaws with which the work abounds."

The Director cleared his throat. "Please. Be serious for once—this is apt to become very grave."

"Oh, but I *am* serious. In fact, levity is unknown in my profession."

The Director sighed. "You *have*, of course, read the Critics. Haven't you?"

"Ahem. That. Universally unfavorable comments, I have heard, so I didn't bother with them. An author quickly learns that any fool can find fault, so he only bothers with the exceptionally perceptive fool who can find virtue— Ah, but what can—indeed, what must—one expect? To cast pearls before swine— That, incidentally, is a line from the play. I have a certain facility, I pride myself, in turning a phrase; and in my career, I've turned a million of them, each equally as scintillating. But, to cast pearls, I say, before swine is the unfailing occupation of the artistically inspired."

"Really, I'm afraid—"

"Ah ha. *Afraid?* Banish that ignoble substantive, fear, from your vocabulary. It, sir, is the hobgoblin of petty minds—to paraphrase one of my better comments upon life. Would you degenerate into a quivering mass of jelly at the first sarcastic comment of a myopic Critic?"

"Well, I must say, in fairness, that there were some powerful objections—"

"Objections? Ha! The play's scarce begun. But I, too, in fairness, will admit that the quality of the acting leaves something of the subtlety out of my superb dialogue, and that several of the settings are a disgrace to an enlightened stage.

"But, again in fairness, I must admit mitigating circumstances, and I duly appreciate them, and they cannot be wholly ameliorated, due to a certain decadence in stage craft and stage conventions. For instance, to take only one of many: It is a trifle sordid sort of a play—but would you for a moment consider circumscribing art by petty moral judgments? And you know that in this day and age sordidness demands sacrifices that competent actors do not need to make, being, in fact, financially independent of the stage, you might say, although, by depriving that subject area, from which all great Art arises, of their histrionics, they do the stage a disservice. Still, I say, one should not cavil at prostitutes; they freely chose their profession. Or again: the usury of our backers severely limits the fertility of my

imagination—but again, I shall suffer in silence.

"But even so, you will see, as the play soars to its compelling climax, these minor criticisms will be engulfed by the universal shouts of approbation acclaiming your foresight and courage in directing this extravaganza of passion. Every day you must observe the increasing emotional impact of my writing. And the gradual unfolding of awe inspiring and cataclysmic events will leave the beholders breathless. Can you *doubt?*"

"Well—"

"But it was, precisely, the level of acting that I came to see you about today. In an endeavor to raise, in my humble fashion, the general level of performance, I have written in a part for myself. Besides, I need a vacation. And, in addition, I have written the script sufficiently far ahead that, barring unusual exigencies, you will have no need for consulting me while I'm on stage."

"This part of yours—?"

"Oh, a little thing. Not much. A happy part, you might say. Perhaps, indeed, the happiest part in the whole play."

"That's what I thought," the Director said. "How are you going to fit a happy part into that play? It'll stick out like a sore thumb."

"What a silly question. I'll tie it right in—as soon as I get back."

The Director waved his hand feebly. "That's already a criticism: they say you leave too many loose ends, as it is. That there are already enough glaring inconsistencies—"

"Please!" The Author shielded his eyes. "Do not dignify the babblings of morons by repeating them, sir! I shall refuse to listen to such vile canards, sir!"

The Director shrugged. "O.K. If you won't listen, you won't. But I warned you. Now, this part of yours. Are you going to be a writer in the play, too?"

"No! Whatever gave you that absurd thought? I'm going to be a *happy* man."

Now the technical effects staff of the Play was no more happy with it than were its most severe Critics.

The Actors—"lean, hungry things," as one Critic sagely observed—were sufficiently exasperating to occupy, exclusively, the complete attention and undivided resources of twice as many technical effects men as the budget provided for the whole production.

Chiefly through wanton carelessness, they were damaging props almost as fast as repair units could hustle, unobtrusively, about to fix them up. That, indeed, coupled with other factors, had made the situation so urgent, recently, due to the need for quick action, that the Actors themselves were spotting the repair teams in the sky and wondering at them in spite of numerous revisions by the Author to explain them away in terms of natural laws of the Play.

Those very laws, too, caused grave concern to the technical effects staff, being, as they most certainly were,

shot through with absurdities, contradictions, and inconsistencies, and causing the Chief of the staff finally to scribble a protest: "It appears to me that the Author, whatever else he may be, is neither a logical thinker nor a man well versed in the physical systems practical for and available to the Stage."

Too, as the Play progressed, the Actors became increasingly restive—many of them, doubtless, being forced, from financial need, to continue working long after their nerves were unsuited to their profession. And few if any of them possessed the requisite ability to carry through the Blackout the sense of loyalty to the theater, the play-must-go-on loyalty, and consequently, in their free-will periods, when they were not directly involved in the main or sub plots, their spirits animated the life props in most curious and unsatisfactory fashions. They had continually to be watched, and they necessitated frequent hasty revisions in the script and no end of other trouble. Several times it had been necessary to remove, physically and summarily, a recalcitrant Actor from the Stage altogether. And this, of course, the Critics were disinclined to approve.

The over-all difficulties of staging were augmented by the complicated plot vagaries of an Author noted not only for his erratic genius but also for his slipshod workmanship and frequent addlepatedness. Currently the technical staff was being driven almost to distraction by his advance script—which called for extending the acting stage to encompass not only the one, but several, planets in the system.

Of late, the Chief of the staff had a full-time scribe whose only job was to catalogue the mistakes. Every time the Chief so much as glanced at the volume, he moaned a weak moan.

One whole section of it was headed: "Casting Office, Fiascoes." That section contained an embarrassing chronicle of objects necessary to the plot being born dead, the Office having failed to provide Actors on time. Since a recent change in Casting personnel, the number of incidents had multiplied alarmingly.

Further, on several occasions, when the terrarium showed signs of becoming unbalanced, in an excess of enthusiasm Casting had poured in a plethora of the missing element. One entry read: "Bugs—1869—summer—land mass: England—arrival of flies, ladybugs, fireflies, et cetera, in excess of requirements." Casting had sent in wave after wave of them, millions upon millions of them—even going so far as to borrow some, of completely different makeup, from another Play.

The technical effects staff, only peripherally responsible, nonetheless had to rectify those blunders in addition to more of their own making.

The entry read: "Ashes—1863—summer—land mass: Africa—rectified explanation, Krakatoa."

On that occasion, the ashes had descended over a large area, drifting in from an explosion on a nearby

planet. The explosion, itself, had been the consequence of canal digging on the surface. At first the Author had been contented merely to cause various astronomers in the Play to report the canals; but later, for some as yet unexplained reason, long after the Play had begun, he insisted upon their physical presence. The technical effects staff had inadvertently permitted the ashes to drift over the acting stage, and, in order to explain them, the Author was forced to divert his plot to permit a semitorpid volcano to be exploded. The Critics chuckled. And even many of the Actors insisted upon noting that the facts were inconsistent with the explanation: the ashes having begun to appear some time before the eruption of the volcano. The Author continued, however, to deliver the explanation through the most noted authorities in the Play, and it was eventually accepted by the Actors. But it had been a bad time, and the Chief of the staff caught all kinds of remarks from the Director.

There were thousands of other entries of like but less startling and universal nature.

But the most pressing problem of all—indeed, the most appalling problem—was that of the stage machinery itself.

The settings had been, by and large, jerry-built, and they were beginning to come apart at the seams. The Critics were sneering whenever objects fell upon the acting stage that could not—by any stretch of the imagination—be explained by the Author's system of laws. They had increasing occasion for sneers; and it depressed the morale of the technical effects staff.

One day the Chief said to his assistant, quite matter of factly, "I won't be able to get another job after this one. Let's face it."

"Oh, come now, Chief, things ain't that bad."

The Chief shook his head. "Optimism is for youth. I'm too world weary for it. Do you realize that my overtime pay roll alone is almost as much as they take in at the ticket office? Something's got to be done. I don't care any more, for myself, but something's got to be done. I've got all my repair units out with orders to keep the Stage from falling to pieces—I've told them, if they have to, let the Actors watch them work. What else can I do? And it's still coming apart. I'm afraid to ask the Director to increase the staff—I'm too far over budget as it is. Something's got to be done."

"You ought to see him, anyhow, Chief. Maybe he'll think of something."

The Chief had a faraway look in his eyes.

"Chief! Answer me!"

"Uh? Oh. Yes, yes. It's a very good idea. I must do that very thing, this very day."

What were the Critics saying?

The Critics were saying very unkind things.

Or—that is to say—after the Lead-

ing Critic had issued an opinion, the Lesser Critics echoed it.

"Discerning no other purpose, this Critic is forced to assume that the Author is aiming at utter boredom, and from what we remember of his last attempt, we are encouraged to note that he has elevated his aim considerably."

"It is difficult to determine the part least deserving condemnation."

"However, it must be admitted, that, discounting the ability to act, the Actors leave very little to be desired."

"The Play soars to ever new heights of carnage. The Author kills off his characters in incredible droves. If he applies himself steadfastly to the task, it is to be hoped that he runs out of characters before he runs out of audience. But this, I fear, appears unlikely at the present, due to the unusually high mortality rate of the latter."

"Real people, of course, could never act so stupidly. There is no development of plot, if there was any plot to begin with— At times, the whole thing—approaches a farce."

"Melodrama."

"One could scarcely insist that truth and justice always triumph; but to have it happen once or twice might not, perhaps, be overdoing it."

"Confusion, inanity and folderol. We can scarcely see how the Author will attempt to tie in all the diverse elements at the conclusion—if he has time to try."

"It has now gone on for a good while, degenerating steadily in defiance of probability. We expect to be the last to leave but we are not packing a lunch."

"It leaves something to be desired."

"So you see, it's desperate. Even the rotation mechanisms are off several seconds."

The Director looked at the Chief of the technical effects staff. He then looked at the backers of the Play.

The backers shook their heads gravely. "This is very serious. We're losing money every day." "What has the Author got in mind?" "Yes, we've certainly got a right to know that."

"I really don't know," the Director said. "He's supposed to be a genius."

"Well, why isn't he here?" "If we could talk to him, maybe we could decide something." "You know we hate to go over the Author's head if we can help it. Maybe he knows how this thing is going to end." "Maybe he's got a way to start it making sense." "Maybe he's got an ending that'll suck 'em in like a vacuum."

"I'm sure he has," the Director said, "if you'll just be patient. He's a genius."

The Chief said: "I've still got to have more repair men."

"We're back to that again." "How can you ask us to sink more money into this rat hole unless we know what the Author's got in mind? "Where *is* the Author, by the way?"

"He," the Director said, "is vacationing in the Play."

"Well—!" "Can you get him out here?"

"The Critics won't like it a bit," the Chief said.

"Who cares." "Nobody reads them." "Yes, we've got to have the Author. That's all there is to it." "In common fairness, we have to talk to him. I mean, we wouldn't want to call in a Play-doctor without talking to him first."

"A . . . Play-doctor?" the Director said. "He won't like that. He won't like it a bit."

"Maybe we won't have to, after all." "Maybe he's got an ending that'll suck 'em in like a vacuum."

Rockwell Hartleib, III, scion of the Boston Hartleibs, awoke. He had been endowed with a curious constitution. Anyone else in the world would have had a hangover, had anyone else in the world been fool enough to consume as much—and as great a variety—alcoholic beverages as Rockwell Hartleib, III, had the previous evening. He, of course, had no hangover at all, and he felt as fresh as a May morning.

He yawned luxuriously, stretching his silk clad arms high above his head, fingering the distant bed post.

He got up.

He phoned Millicent.

"Hello," he said brightly.

There was an answer of vowels, painfully vocalized.

"I see you got home all right," he said. "This is Rocky. Can I pick you up this afternoon? For a drive?"

"Oh? It's you, my dear boy," came the answer. "What can you mean waking up decent people at this

hour? What would your family say—if they were alive? I suggest that you take a cold shower and go right to bed. Phone me back about six."

"But, Milly—"

"Now, now, little man. You do what I said, or I shall be very nasty with you."

"Really, Milly, it's such a beautiful day—"

"Listen, hang up that phone so I can get me some sleep."

Being a gentleman, he hung up the phone.

He slipped on a dressing gown and lit a long cigarette after first carefully inserting it in a long, black cigarette holder. He sat down.

The smoke was unusually good. But, in the mornings, it was always unusually good. He blew lazy clouds at the ceiling.

After a while, he rang for the butler.

"James," he told the man, "I shall need the car at ten o'clock. For breakfast, I think I'll have two eggs, half a dozen rashers of bacon, a pot of thick, black coffee, three slices of light toast, marmalade. Strawberries and cream. Let's see. The eggs about two and one half minutes, I think. I guess that'll be all— Oh, yes! Bring me in the *Transcript,* will you?"

Settled comfortably with last night's paper, he turned immediately to the comics—completely ignoring the news, in fact, being indifferent to it at all times, and the market reports, being, in fact, independent of them at all times. He chuckled happily at the comics. He was not notorious for his sense of humor, but, with some discernment, he always pointed out, "At least I'm happy with it."

Midway through the comic section, he suddenly became aware that something was standing behind his back. Lazily, he rolled over.

"Come along," the repair man said.

"Come along? Nonsense, my man. I'm perfectly content right here. It is fantastic to think that I should for one moment consider going anywhere with you for any reason whatsoever."

"Dear me," the repair man said, and reached out with his hooks.

Rockwell Hartleib, III, put up quite a fight.

"The audience," the repair man pleaded, between pants, "remember the audience."

When James returned with the breakfast tray, his handsome young master was no where in evidence.

The Author came through the memory blackout. He was in the Director's office. He shook off the repair man's hooks and found himself still wearing the body of Rockwell Hartleib, III. He looked around the office, saw the assembly.

"Well, get me out of here."

Obligingly, the repair man cracked him behind the ears with a hammer, and Rockwell Hartleib, III, slumped to the floor as dead as a mackerel. The Author stepped out of the body.

"Now, gentlemen, I assume some dire event—one of the uttermost of

consequences — some calamity, in short—has caused you to interrupt my vacation. I'll be glad to take care of it right away, and then I really must rush off to bed. I find myself strangely fatigued."

"Well," the Director said, "you see, there is—"

"Ah, sir, we merely desire—" "That is, ah . . . some of our best steady-goers have already quit us. They say, frankly, it's nonsense, the Play, and you've got in deeper than you intended, and you can't possibly get out or make sense of it." "Oh, yes, the gate is falling off astonishingly." "And we thought, if you'd kindly tell us the climax—" "You see, the setting is coming apart, and before we . . . ah . . . invest more money—"

"The climax, gentlemen? Why, gladly. But gentlemen—is it to be conceived that you lack faith? You don't think—*surely* you don't think—that I don't know where my own Play is going?"

"Well," the Director said, "they do say it lacks any dramatic . . . ah . . . cohesiveness, and every time you get stuck, you just have another war."

"Wars," the Author said, drawing up to his full height, "illustrate my thesis!"

"Oh?" "And that thesis?" "Yes, what is that?"

"Can you gentlemen — of strong minds, I dare say, and sound bodies —think for one single little instant that I have none?" His voice fell craftily. "Do your minds entertain the absurd notion that I am merely parlaying my Play along? Stretching it out, prostituting Art for financial gain? Living off you like a conscienceless parasite? Hoping for an inspiration? Hoping to snatch both thesis and climax out of the air when you have stood all of my procrastination that you intend to stand? Do you really think that?" His voice had sighed to an emotion heavy whisper.

"Dear me, no." "Of course not." "But really we must know the climax."

"I see. As long as there is not the least iota of suspicion—and if I thought there were, I should leave you flat, gentlemen: I have my pride. As long, I say, as you continue to trust me implicitly, as an Author must be trusted, I shall tell you the ending— But, gentlemen, it occurs to me, in fairness to all of us, so that you may better appreciate its full power, I believe I will draw up an outline for you. I think much better, late at night, gentlemen, and I assure you, in outline form my thoughts are always as beautifully lucid as a theorem in mathematics. I'll bring it in, say, next week. How'll that be, gentlemen?"

"Ah . . . well—" "No, I'm afraid—" "We really must *insist* on it tomorrow."

The Author was taken aback. "Three days from now, gentlemen. That is the absolute earliest that I can have the summary of the final installments. The *absolute* earliest."

"Tomorrow." "Yes, we must

have it tomorrow." "We want to call in a Play-doctor as soon as we can, if we have to."

"A— Gentlemen, did you say Play-doctor? Can you, my friends, realize the import of that noun on a playwright's ears? Gentlemen: day after tomorrow."

"No!" "Tomorrow!" "Just a few scribbles — anything making some sense out of the Play."

"If I had more time— Please, gentlemen, consider—"

"If it's not here, we shall turn it all over to the Play-doctor."

"I told you so," the Director said.

"We've trusted you all along, haven't we?" "We're sure it'll be a fine ending." "I'm sure it'll be an ending that'll suck 'em in like a vacuum."

The Author sat down at his desk, pulled out his script digest, thumbed through it rapidly, and shook his head.

"I am amazed," he said, turning to his Secretary, "at the fecundity of my imagination. Surely such a mind, so rich, so fertile, should be able to make some sort of sense out of it."

"I should certainly think so, sir."

The Author stood up. "I do seem to have got just a bit involved. Perhaps I shouldn't have tried to put so much in the Play. With a few less elements, I'm sure I could figure out something."

"It is very complex, sir," she said, "what with all kinds of wars and all kinds of intellectual movements, and all kinds of philosophies, and all kinds of emotions and things. But it's very powerful, sir, even if it isn't going any place."

"True," the Author said, "a masterpiece beyond a scruple of a doubt. A veritable treasure chest of significancies—if I could only understand them."

He toured the room, observing articles of furniture with a critical eye. At length he said, "My grandfather, on my mother's side, was a willful man. One day, in a fit of pique, occasioned when his whiskers got into his soup while he was trying to drink it from a bowl, the old gentleman set fire to his beard. The beard being moist, it only sizzled and sputtered. Whereupon grandfather doused it into a can of highly inflammable liquid with the most lamentable results. On that unhappy day, my father said to me: 'Let that be a lesson, son. When you grow a beard, never try to light it.'"

"Yes, sir?" the Secretary said, hopefully.

"I attempted to resist temptation by refusing to cultivate a beard. Now would you care to watch me burn this script?"

"Of course, sir," said she.

"If you will just bring me some material that I can pour over it, which, upon the application of fire, will turn it into an incadescent heap, we shall proceed."

The Secretary complied.

When the script was crackling merrily, the Author began to smile.

The flames threw weird shadows on the walls; and stinging smoke bil-

lowed out, filling the room. A brief summary of a long Play turned brown and withered, and blackened and collapsed upon itself. A vagrant breeze, from one open window, stirred the ashes fretfully.

"That," the Author said with finality, "is that."

"But, sir, I don't quite see how that helped you think up an ending."

"I was getting very tired of this particular Play," he said, ignoring her, "and not very proud of it, either, to speak the facts. I never did think it was one of my better Plays." He crossed the room and sat down.

"I was always weak on Science. One shouldn't write about something one knows nothing of. I fear I shall never learn that, however. If I hadn't made the whole system so absurd . . . oh, well— What's past is, after all, past."

"You can think of something, sir."

"No, my dear girl, it is too late, now. I've only until tomorrow. I'm resigned. Making any sort of sense out of it would be impossible."

"You've said, yourself, sir, that you're always doing the impossible," she reminded him.

"Quite true. But I've also said that it takes until day after tomorrow. Well, would you care to have dinner with me?"

"I'd rather not, tonight, sir. I can see one of your nasty moods coming on."

"Perhaps you're right, there. But we Artists are continually set upon by Worries. It's enough to make us nasty. Imagine being forced to understand your own work! That, as any fool knows, is the job of the Critic."

"You've always come up with something, sir. Every time."

"Thank you," he said. "Yes, my dear, your insight is acute: I'm starting to feel positively vile."

He left the room.

Once out of the house, he went directly to his club where, among others, writers were wont to assemble.

"Hello, old man," said a writer, rushing to the door to greet him with outstretched hand and bland smile. "I hear they're about to call in a Play-doctor on you. *Tsch-tsch.* I know how you feel. Happened to me when I was just starting out. Couldn't write a line for the longest time afterwards."

"I'll have an ending," the Author snapped. "In fact, I've *got* an ending, right now."

"Oh—" the writer said, his smile evaporating. "That's fine. That's just fine. There's nothing I like to see better than another writer's success."

"That's what I like about this profession," the Author said. "Our esteem for our colleagues' success."

He went to his table and sat down. He ordered a drink.

Over the drink, he shook his head sadly at no one. He sat for a long time.

Suddenly he jumped up, kicking

over his chair. "I knew I wouldn't fail me," he said aloud. He rushed into the foyer.

He buttonholed the first person he saw.

"I've got it!" he said. "It came to me in a—" Then, remembering himself, he said: "That is to say, I would sincerely desire your reaction to an ending I intend to use in my Play. I've been mulling it over for some time and I want an honest opinion from a neutral observer."

Then the Author began to talk rapidly and excitedly. In the presence of ideas, he discarded syntax.

"Look! You heard they said my Play was chaos? Well, I admit it. Sure it is. That's the point! And my science is all screwy? That's the whole point, don't you see? Naturally, if it weren't, I wouldn't of wrote it that way.

"Look! You know how it runs . . . the whole thesis is . . . the mind introduced into a hostile environment, an environment that demands contradictory things . . . that creates ideals and then destroys them. Don't you see? Well! I show that even there the mind triumphs. I show how it triumphs through sheer perseverance. How, out of utter absurdity, it will eventually come to overlay some sort of system of physical laws that will actually work!

"And then . . . then I show how the mind realizes that there can be an overlay of social laws that will work even in a hostile environment . . . that will work! I don't pretend they're right, but they work. And then they really look for those laws and find them, just like they found the physical laws. And how they ignore precedent and orient themselves by them!"

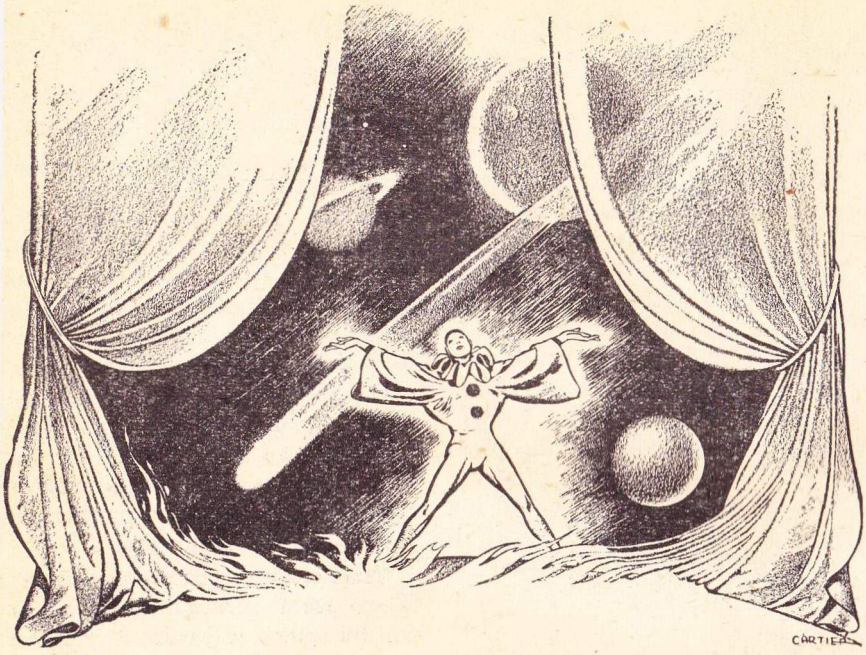
He paused for breath.

"And the past ties in—that's the beauty of it! How, for them, evil was really necessary before good could be. How evil gives insight and creates need, out of which—in answer to which—good arises! How, since evil and chaos are indissolubly united, good can only come from an awareness of order, and how that awareness can come only after trying first one thing and then another, in a long, heartbreaking search!

"Look! Can't you see the ending? They rise above their whole history to find truth and justice where there really is none. They look back on the horrors of their past, and they know that tomorrow will finally be different!

"I can see them singing and laughing and happy. I can see their smiling faces and hear their songs ringing clear and joyous. It's beautiful music; and there is a golden sunrise— The birds are singing, too . . . everything is singing. The Actors have tears in their eyes out of the sheer joy of living. And slowly, as the curtains falls, comes sweet perfumes of spring—universal spring—creeping out to the audience! I can see the audience weeping in sympathy."

"I can't, Buster," the man said. "I don't know you. I never heard of



your Play. I think you're nuts. I never go to the Theater."

". . . The ultimate triumph of perseverance!" The Author smiled, having completed his reading to the backers and to the Director.

For lucidity, it had been a nonpareil presentation. Everything had been fitted into its proper place; divergent actions had been shown to draw the thesis into proper perspective. Psychological rationalization had achieved its greatest triumph.

It was met with stony silence.

After an uncomfortable period, the Director said, "Ah . . . quite— Most ingenious. Oh, very fine indeed. A true masterpiece. But—"

"Surely—?" the Author said, looking around him at flinty profiles. "Surely, gentlemen—"

"Quite good." "Astonishingly fine." "However . . . it seems, perhaps . . . I mean—" "Yes, don't you think it's going it a bit too strong?"

The Author shook his head slowly. "Gentlemen, modesty forbids me to speak out on the obvious merits of this solution. But I think the facts themselves present such a preponderance of weight to it that only a dizzard could fail to see in it the hand of one of the greatest Artistic geniuses in our generation."

"I'm afraid it's such a sordid play, it demands a sordid ending," said the Director.

"But that's the whole point – it doesn't!"

"Really, whatever effect you've built up," the Director said, "would be destroyed. I'm afraid that's the way we feel about it."

"I see it," the Author said calmly. "I see it all now, very clearly. Say no more. You, sir, are throwing me to these wolves." He waved at the backers, and his voice became indignant. "Having despaired, cravenly, of success, you think to ingratiate yourself with these Philistines and disown all affiliation with true Art. You, sir, cannot possess the moral courage of a beast. Knowing that Art's breeding ground is opposition, at the first sign of it, you desert the banner. One, in short, sir, as I remarked so aptly in my Play, cannot have enough contempt for that sort of thing. But I bear you no malice, sir, holding small minds beneath my notice."

"Now. Now." "While the ending of yours is everywhere admirable–" "You see, we have already consulted a Play-doctor."

"Ah ha! Anticipating a corpse, you have summoned a scavenger. Finding no corpse, to salvage your self-esteem you desire to provide one."

"Please, in fairness–" "You don't quite understand." "The situation–"

"Bah!" said the Author. "I shall never again affiliate myself with you in whatsoever a capacity."

"True." "That is very likely." "While regrettable, that appears as a definite possibility at the moment."

"I really think," the Director said, "your idea is fine. But, under the circumstances–"

"Art does not recognize adversity, nor its allies."

"What we want to say is, as fine as your idea is, we're sure the Critics would not approve." "Yes, good as it is, it could be a target for attack." "The fact of the matter is, whatever you do, the Critics will be sure to pan it."

"You force us to tell you the unpleasant truth," the Director said. "You see, some of your remarks about them have got back to the Critics. Hereinafter, I'm afraid, nothing you write will meet with an enthusiastic reception."

"And while it is too bad that we simply can't permit your name to kill the gate, we really think the Play-doctor has a better idea anyway." "And it's cheaper; we won't have to repair any of the settings." "And it'll suck 'em in like a vacuum."

When he had gone, the Director let out a long sigh. "Such a pity; he's a genius, you know."

"Terribly sorry." "Awfully hard on him." "But after all, we must think of ourselves."

"Now," the Director said, "if you'll wait just a moment, I'll call in our advertising man, and then we can get to work on the new ending."

The advertising man came immediately. He was full of bounce. He walked briskly to the center of the room. "How do you do?" he said, bobbing his head in the direc-

tion of the backers. "I've already been briefed. No sense in wasting your time and mine going over it again. This is an ending that will shock people to their very bones. We intend to play it up that way, emphasize the horror angle. Not give away much of the actual ending, you understand, but just enough hints to whet the appetite.

"As you know, it will not be Art. But we know all about Art, don't we? It will be—frankly—blood and thunder. There will be plenty of excitement. We will aim at the masses, the little fellow in the galleries."

"Let the Critics go hang." "Nobody reads them." "We've got an ending that'll suck 'em in like a vacuum."

"Exactly," said the advertising man.

"Now, if you have no suggestions, I will show you the first draft of our literature. You see here, the red border—"

The clients were buzzing with rumors until the millions of casting offices and the millions of reception rooms gave off a sound not unlike that given off by a giant hive crammed with angry bees.

In one of the offices there were five clients. The sixth materialized from the stage. He stepped down from the exit platform.

"Whew!" he said. "That was a rough one." He signed in. "Please!" he said. "No more like that one!"

The clerk said, "I'll see what I can do."

The sixth client crossed the room and joined the others. "It's rough out there," he said. "And I think it's going to get worse."

"Then you've been on stage for some time?" one of the others said sympathetically. "You haven't heard what's going to happen?"

"No. What?" the sixth said.

"Starting tomorrow," the client said ominously in answer, "all the jobs go on extra pay."

The sixth client blanched. "No!" he hissed in unbelief, and then, hoarsely, he whispered. "You mean it's going to get that bad? I don't believe it!"

"But it's true, though. I know for sure. I was in the wings just a little bit ago, and you know what?"

"No," the sixth said weakly. "What?"

"All the repair men are gone!" the client announced in triumph.

"That can't be right," said the sixth, shaking his head in numb puzzlement. "They can't take *them* away. Why, if they did, the whole stage would begin to fall apart."

"That," said yet another client, "seems to be the whole point." He lowered his voice. "In fact, I've been told in strictest confidence by a man who should know that they're even calling in a wrecker crew, too. To help it along!"

"And the ads! You should see them! They're really not giving out all the details of the ending either. It's enough to make your flesh crawl."

"You really mean . . . you mean,

they're actually going . . . no. That would be the cheapest kind of sensationalism! I can't believe it. They couldn't expect us to go through that. They just couldn't. If nothing else, we've got our reputations to think of!"

"Oh, but you haven't heard the worst—"

"I . . . I don't think I can stand any more. It's positively fiendish already. I'd rather not know— "We don't have to put up with it! Consider our Art. I tell you, no self-respecting Actor ought to stand for it!"

One said, "That's why it's all going to be extra pay from now on." Another asked, plaintively, "But what can we do?" And a third said, "After all, it is good money, you've got to admit that."

The sixth slumped down morosely. "I'm beat," he said. "Let's face it—we're all beat. They've got us and they know it. We've got to work."

The clerk's buzzer sounded, and the clients all rushed his desk and jostled each other at the railing.

After a moment, the clerk called out a name. The one client remained; the others slunk back to their seats.

"Can't you give me a hint?" the client asked the clerk.

The clerk shook his head; he reached over and pulled forward his pay roll sheet.

The others watched closely as the client signed out.

"Well," one of them said, "I wonder what that poor devil's going to be?"

The rest looked blank. "I'm afraid to guess," one finally answered.

"Maybe he's going to be an insect of some kind. Those are pretty good roles, usually."

"Or maybe a fish, or a bird—or even a cat or a dog."

"He wouldn't mind what's going to happen then. Not so much, I mean. It doesn't *mean* so much to the background pieces."

Another client cleared his throat. "But imagine being born right now as a—"

"Don't! Please, have you no mercy? It's too horrible to think about. Don't even mention it."

One of the other clients jumped up. "That does it! That does it!

They can't hire me for that sort of hing! I've got my pride. I don't ieed a job *that* bad!"

He stalked out of the office.

After he had gone, the rest unched forward with relief. It made heir chances of getting work just hat much better.

The Director looked across his lesk at the Lawyer.

The Lawyer cleared his throat. 'No," he said, waving his hand in a iervous gesture. "No, we aren't le-gally liable. That's taken care of. You see, the Actors sign out of their own free will. We're not responsible, n that sense."

"Well," the Director said, "I'm glad to hear that, anyway. At least hat's one thing solved. But now, ibout this union business. Could we slap an injunction on them?"

The Lawyer frowned. "Frankly, I doubt it. You can't force a man to act."

"Well, then, if we go on keeping it quiet, could they sue us?"

"They could. But, then, if you didn't keep it quiet, you couldn't get Actors, I'm afraid. How much onger will the Play run?"

"Not long."

"In that case," the Lawyer said, 'I'd risk it, if I were you. We can probably beat the suit. Just go on keeping it quiet. Don't let it leak out."

"Yes, we must keep it quiet." "We can't have the union strike." "We can't have the Actors quit." "Not while were sucking them in like a vacuum."

Three uniformed men stood by the exit platform.

"Get ready," the clerk said. "Here he comes—"

"No!" the clerk corrected sharply, after rechecking his records. "This one's O.K. He was a sparrow."

The Actor materialized. He looked dazed. Without a word, he walked out of the office.

There was a wait.

"No!" the clerk said excitedly. "This is it! Here comes one that was a human."

The Actor materialized. He struck out blindly. One of the uniformed men went down and out.

With a blood curdling shriek, the Actor bolted for the corridor.

"Stop him! Stop him!"

A guard threw himself out of the way just in time and then started off in hot pursuit. His feet pounded hollowly.

A second guard saw the raving Actor coming. He made a flying tackle, and the Actor went down solidly.

The guard sat on him. The Actor was still screaming disconsolately.

The second guard came up; he was panting. He shook his head sadly.

"These horror plays," he said, "are sure tough on Actors."

THE END

EXPERIMENTUM CRUCIS

BY ANDREW MAC DUFF

The experiment was one that was simple enough, just awaiting contact between the right peoples. But Torth didn't choose to be among them . . .

Illustrated by Cartier

Torth rose to conceal his impatience at the tone of the argument. He turned away from the Earthman and summoned a slave to heap up the cushions more comfortably.

"Dunno why I stopped here!" Donnelly complained again. "You got nothing worth trading. Still, it ain't fun to go twenty light-years an' not land on *anything!*"

He stared disgustedly at the painted picture-diagram hung on the wall by Torth's orders. He apparently saw nothing of interest in Athazt's satellites — Prittanok, the colonized moon, Riast, Trox, and the mysterious Ganph—depicted revolving about the planet.

Torth regarded him silently. *I wonder why I ever bothered to learn your language, Dahn-el-ee,* he thought. *Was I mistaken in liking the first few Earthmen who came to Athazt?*

"You wouldn't understand," Donnelly continued. "You Athazatans never got any place but that first big moon . . . what do you call it again?"

"Prittanok," answered Torth laconically, directing a bored glance out the wide, low window at the craggy mountains beyond the harbor and landing field.

He twitched one of his short antennae at the servant, who departed as silently as he had crept in. Torth wanted to go check up on the morning's trading, but seated himself again.

He wondered at the animosity growing within him. After all, he and the Earthman were not unreconcilably different in looks. The

visitor had skin of a pinkish brown in place of fine, dark-green scales; and his limbs ended in five stubby, jointed members rather than seven deft tentacles. Also, Torth was aware, he was unpleasantly warm to the touch. Nevertheless, in general configuration, they represented comparable results of independent evolutions.

Maybe I dislike being unable to read his expression, Torth decided.

By Athaztan standards, the Earthman's face was fleshy and crowded. He had no antennae, save for flat, crinkled appendages at the side of the head where Torth had air vents. Only the smallness of his mouth made Torth conscious of the fanged gash across the smooth oval of his own face.

"You never landed on any of your other three moons," said Donnelly. "Nor any of the four planets besides Athazt."

"What need?" parried Torth. "Our astronomers report they are all either sterile or frozen. Except for Prittanok, there is nothing to attract us."

He wondered idly whether that were quite accurate. For seven years, Athaztan scientists had been arguing about Ganph.

The Earthman lolled back on his cushions. Torth remembered how quickly he could move in Athazt's gravity, despite his clumsy appearance, when he wanted to. His laziness must be due to boredom, not fatigue.

"What ails you?" Donnelly demanded. "You have the means for space travel, all right. Why no ambition?"

Torth rippled his hand-tentacles together in a rising motion that would be noncommittal in any language.

"Perhaps the Department of Exploration has not made the rewards great enough," he suggested.

"You mean they actually have rewards posted for reaching those moons?"

"Ten thousand *kaft*, on which one might live very comfortably for an Athaztan year, for landing on Riast or Trox—that is to say, 'Two' and 'Three.'"

The Earthman expelled air from his mouth in a shrill whistle.

"And for reaching Ganph, the farthest, twenty thousand. There are like awards for sponsoring such expeditions."

"What does Ganph mean — 'Four'?"

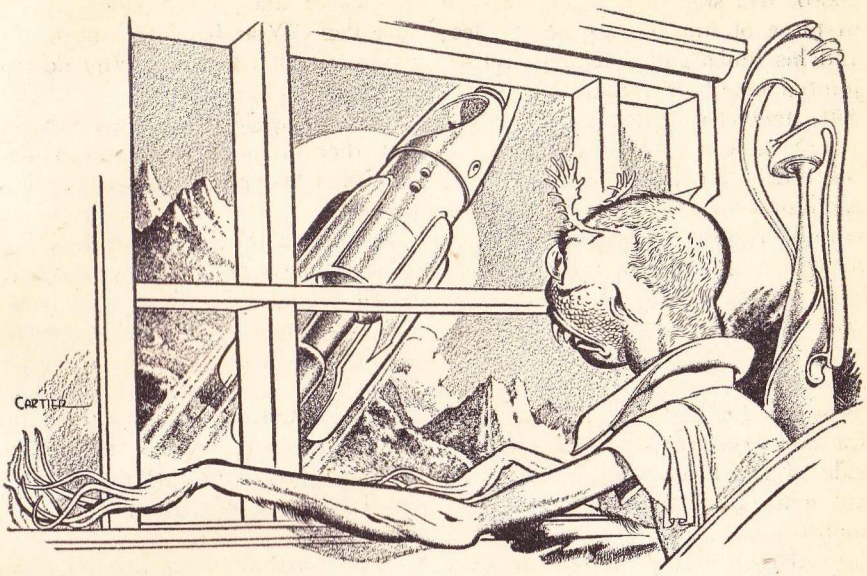
"No, it means 'Unknown.' We do not yet have as much knowledge of it as of the others, even the planets."

"Oh, far out and sighted not too long ago?"

"That is about the case," Torth agreed, with only slight reservations.

He welcomed the interruption of his televisor chime. Gliding over to the instrument, he switched it on and saw the visage of one of his underlings.

"That shipment of tunic from Kajif is trouble," the latter reported with a worried expression. "All de-



fective, and cheaper materials than we paid him for."

"The bandit!" murmured Torth.

He hissed thoughtfully, first from his right-hand air vent, then from the one on the opposite side of his neck.

"Well, I shall remember Kajif," he replied after a pause, "but the first thing to do is save what *kaft* we can. Ship the lot up to Prittanok. They will buy anything there. We may even be able to raise the price, which would give Kajif a fever."

He switched off and wandered to the wide window. Vines and shrubbery along the neat street leading to the main section of the sprawling port city were turning a gentle blue in the spring season of Athazt, but his mind was on Kajif. Now that slippery robber was two deals up on him, and Torth did not relish inroads upon his hoard of *kaft*.

"How much *do* you know about Ganph?"

He had almost forgotten the wearisome Earthman, who had been so unimpressed with the goods Torth had to offer. He was not too certain of the location of this star Sol, but the technology of its distant planet must be far advanced. No use trying to sell them gadgets.

"Little is known definitely," he said, gathering his thoughts. "Also, an astronomer could tell you better than I. Ganph travels about Athazt in a retrograde direction, taking about twelve of our days, and at a distance which I find difficult to translate offhand to your scale. It is

quite small, probably little larger in diameter than the city out there, and some rather rare radiation has been detected about it."

Donnelly sat up as if interested at last.

"What kind of radiation?" he asked.

"I am not a scientist," Torth retorted. "Nor am I accustomed to the scientific terms of your language. To put it roughly, I suppose you might say Ganph is radioactive."

"Radioactive!" Donnelly bounced to his feet with an excess of muscular power. "Why didn't you say so? *That* might be worth lookin' into. I certainly ain't seen anything else around here worth my hauling it back to Sol."

"It is true there is a reward for landing on the small moons," said Torth thoughtfully. "Naturally, it was not intended . . . that is, with a star ship like yours, Dahn-el-ee, it would be a game for cubs."

"What of it?" demanded the Earthman truculently. "If I take off and touch all three on one little trip, I got a good claim."

"True," admitted Torth, hissing quietly to himself.

"And you said they put up the same amount for the sponsor. What's he supposed to do?"

"Build the ship, pay for supplies and equipment, and so on," Torth told him.

"Well?" asked the Earthman, looking at him with what he suspected was intended to be a meaningful expression.

"You are hinting that I . . . back such a flight?" asked the Athaztan slowly.

"Sure! Won't cost you a single kaft—I've got the ship. If an Athaztan backs the deal, your government ain't likely to object about the rewards, are they?"

Torth walked deliberately over to his cushions and sat down. He felt that there was something more here than simple enthusiasm for progress and exploration.

"No," he answered. "I suppose not."

Torth tried to recall his earlier talk and remember when Donnelly had first shown interest in Ganph. Had it not been—? Yes, when radiation had been mentioned. And two days ago, the Earthman had inquired about obtaining radioactive metals. But the prices at which Torth had offered to supply them had been too high, and the quantities too small.

"Of course," he said aloud, "there may be other profits. Should you discover any valuable ores, for instance—"

"Oh, well, I might take just a quick look," said Donnelly, waving one of his big flat hands in a sweeping gesture.

Even Torth, used to prying meanings out of entirely different visages and bodily motions, could tell that the Earthman was disturbed by the question. He apparently forgot to inquire about Ganph's retrograde motion, the only case known to the

Athaztans. Torth debated explaining it as the result of Ganph's having been captured seven years ago from the comet it was trailing.

"The government would naturally reserve a portion," he added.

"And who gets the rest? Assuming I do find anything?" asked Donnelly intently.

"A large part would be divided between members of the expedition —in this case, just you—and the sponsor."

"Humph! The more you tell, the more it shrinks. Maybe I'll just stop off on my way out-system."

He went over to the picture Torth's slaves had hung on the wall, walking lightly despite his bulk. He studied it carefully. Torth made a shrewd guess as to what went on in the Earthman's mind.

"Your star ship is very large," he murmured. "And Ganph is a small moon."

Donnelly pivoted to face him.

"So?" he challenged.

"So if you were to search Ganph thoroughly and use your machinery on it, you might be able to carry away a great percentage of any valuable ores, tax free. Is robbing us in your mind, Dahn-el-ee?"

The Earthman's face shaded to an even more reddish color.

"Of course not!" he denied loudly.

"But you seem to lose interest in the 'progress' you have been reproaching us for lacking."

"Well . . . it just don't look like such a good deal as I thought. Not enough in it for me."

By Prittanok's poles! thought Torth. *He is preparing to bargain me down. The ignorance, the insolence of him!*

"Forty thousand *kaft?*" he asked aloud. "Even if you must use it to purchase our inferior products to carry away, it would still be like picking up the money to one with a ship like yours."

"Yeah . . . well, I dunno—"

Should I let him cheat me? Torth asked himself. *Even for "scientific progress"? But he is just begging in his obnoxious way for a chance to settle all arguments about Ganph. What would they say of me?*

Donnelly had paced to the window, and turned to look back at Torth.

"It would be a nice little profit for you, though," he said pleasantly enough, "considerin' that you really ain't doin' anything."

"Except arranging the legal details and making it possible for you to collect."

"Well, yeah. But that don't cost you anything. It seems to me that maybe the rewards to the sponsor oughta cover that."

And if I say no, thought Torth, *he will either steal whatever he can find, or refuse to go at all—which might really be best. No! I would be perfectly justified in sending him at his terms; it is his plan.*

"Well . . . forty thousand *kaft,*" he murmured. "As you say, clear profit. It would make up for a loss I had today."

"Well, then?"

"You would not mind putting your mark on a brief document before you take off? To make sure I get at least the forty thousand? I should hate to do all that talking and then learn that you were your own sponsor!"

Torth hoped to imply that his disappointment might have unpleasant consequences, and was satisfied that he had succeeded.

"Sure," agreed Donnelly. "Bring it on. Then I'll get going. I can be clear ten minutes after I get to my ship."

Torth summoned the attendant outside the chamber and sent him for a secretary. As soon as the latter arrived, the trader dictated a short statement. He translated the agreement to Donnelly, and they both burned their marks into the thin leather. After unplugging his electrical stylus, the secretary departed with orders to be discreet. Torth had a ground car brought around to his private gate for Donnelly, whereupon they parted.

When he was alone, a slave brought him warm lizard soup and he settled down to wait.

Presently, through the window, he detected activity out at the landing field. Some time later, it ceased, and he saw the Earth ship rise through the air.

I wish I knew what he has for a drive, he reflected. The Athaztans still used rockets.

When the Earth ship was out of sight among the blue-gray clouds, he forsook the window for his televisor.

"Get me the Department of Exploration," he ordered his operator. "Get the Director himself if you can."

It took a few minutes, but in the end he identified himself to the Director.

"I have the honor to announce," Torth said after the required exchange of amenities, "that I am sponsoring a flight to Riast, Trox, and Ganph."

"To land on them?" asked the Director. "Did you say *Ganph?*"

"That is correct. Believe me if you choose, but I found someone eager to try it. He is already on the way."

"On the way?" The Director looked doubtful.

"Yes. That is why I must request to have astronomers assigned to observe Ganph immediately. I expect it to be first."

"Well, I suppose I can do that," said the Director. He wriggled his antennae uneasily. "Ganph . . . well! Are you ready to offer proof of your sponsorship? In case of rewards, I mean?"

Torth held up the agreement inscribed on the legal leather. He said, "I am always meticulous where money is concerned."

The Director hissed with both air vents.

"Quite so. But you know the current scientific opinion! It has been all but proved."

"Why, as to that," said Torth,

"there are but two possibilities. This document takes care of one."

He paused briefly, thinking of how he had been scaled and gutted if that one turned out to be the actuality.

"Either way," he continued, "it will end the arguments."

The Director nodded reluctantly.

"And on the other hand," finished Torth, rippling his hand tentacles together, "if your physicists *are* right, and Ganph really *is* negative matter, there will be a beautiful flare-up to prove my claim."

He switched off the set and glided over to the window. He stood there a few moments, though he knew it was half a day too soon, gazing speculatively up at the sky.

THE END.

IN TIMES TO COME

The cover yarn next month is another of H. Beam Piper's excellent Paratime stories—"Temple Trouble." Operating under cover as the paratimers had to, to prevent the peoples of other time tracks from finding them, imposed certain restrictions on the things they could do in the way of commercial exploitation. Particularly when the paratimers behind a widely accepted "religion" started getting into trouble from a new fanatic cult! Lots of miracles up their sleeves, of course, with the techniques they had available. But their sleeves were rigidly strapped down by their own paratime laws! Knowing you can win, by exerting no more effort than the waving of a few fingers over push buttons, and not being allowed to . . . *that's* the kind of times that try men's souls!

And then there's a long novelette by a new author, "A Stitch in Time," by Sylvia Jacobs. Uncle Sam was looking for a crystal ball—predicting accurately what will happen if you follow a given course of action could be somewhat useful in a not-too-stable world—but what he got was something quite otherwise. It reduced high-powered scientists to babbling baby-talk, and drove government agents into ministering to the Eskimos. And that because it worked so well it didn't do what they wanted and forced them to stop using it!

Hm-m-m—time effects *can* be confusing, at that!

THE EDITOR.

HIGH THRESHOLD

BY ALAN E. NOURSE

Adaptability — including mental adaptability — is essential. This time they had a problem; all they needed was someone who'd look at it and report — but that required something more than human adaptability seemed to afford!

Illustrated by Orban

They cut the current the instant he began, switched off the main pumps, and broke into the vault. Half dragging him from the chamber, they tried to slap him into silence as his piercing screams cut into the thick atmosphere and deadened against the heavy walls, but he stood cowering and shrieking, his white face twisted beyond recognition, his eyes bulging and fear-ridden. Finally a quarter of morphine quelled the original attack, and he sat blubbering in the chair, totally incoherent in a desperate attempt to communicate, until he suddenly choked and vomited, and fell forward on the floor. Five minutes later there was no pulse nor blood pressure. He was quite dead.

McEvoy twisted the small round object from his clenched fist and examined it under the arc light—an eight centimeter ball of rubber, smooth and slick on the outside. With a penknife he sliced through the outer layer to reveal the fuzzy down that lined the interior. He snorted and tossed the ball to Fritzer. "There's your tennis ball," he said.

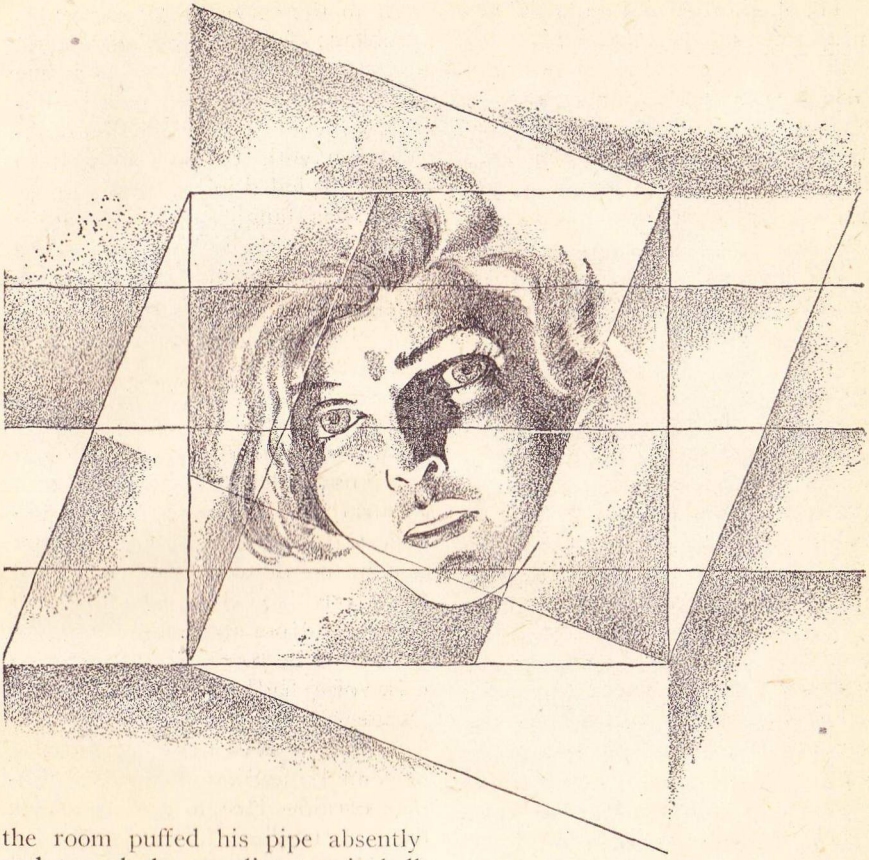
Dr. Marks was examining the body, his balding head extra pink, his hands trembling.

"What's the word, Doc?" asked McEvoy.

"Aortic rupture. Possibly auricular collapse, but I doubt it. The man simply died of fear."

McEvoy clenched a heavy fist and scowled. "What I thought. Same wretched thing as all the rest. What about it, Fritzer?"

The small sharp-faced man across



the room puffed his pipe absently and tossed the peculiar tennis ball into the air a time or two, staring at the body on the floor. "We can't go on like this, you know."

"I know we can't"—McEvoy ran a hand through his sandy hair—"but we've got to go on somehow. We can't let this thing slide by – it's right in front of us. Right at our fingertips. And we can't touch it! Can't even get near it, it seems. We *can't* quit now, Fritz, just because—"

"Just because everybody dies?" Fritzer's blue eyes flashed sharply at McEvoy. There was something ruthless in the man's tireless drive, he thought, something almost inhuman. "You're the one that talked 'em into it, McEvoy. 'Nothing to worry about, lad, it's all fixed this time,' you said. Good old Mac, always the persuader. So now he's dead. How would you like to go in there next time, Mac?"

"Not I," said McEvoy, glancing

quickly away from the body on the floor. "Not after that, not I."

"The simple fact remains, Dr. McEvoy, that you'll have to close it down." The director tamped his pipe and applied a careful match to the coal. "We just can't have any more accidents of the sort we had this afternoon. They're out. If the Institute doesn't close you down, the Federal authorities will."

McEvoy was silent for a moment. Finally he spread his hands persuasively. "Sir, a careful consideration of all points has brought us to several definite conclusions. We'd at least like to present them."

"Dr. McEvoy, the evidence in my hands indicates that since you started this work in November, 1973—that's just six months ago—no less than five of our top-rank investigators, the very best we have, have been killed working on your problem, and you have nothing, absolutely nothing, in the way of a solution to offer for it. Those men would better be alive. The only definite conclusion I can reach is that you're playing with something you can't manage, and I think it's time to call a halt."

McEvoy squirmed in his chair. "You're right—we've lost five men, and I frankly wouldn't care to be the next. But we do have something to offer for it, at any rate. Tell him what we figured this afternoon, Doc."

Dr. Marks shuffled his feet and cleared his throat. An odd sort of person for a psycho-physician, this little, pink, balding man, but a top man in his field—a broad field, and an exacting one, in such a place as the Institute. "I think I may have a solution at least to the investigation problem," he said. "We've been able to trace a definite pattern in this thing, and it makes sense. In each case a man has gone into the vault after the cube had materialized. In each case he was alone, and was instructed as well as possible in the technique of observation. Since we are not sure with just what we are dealing, we can't instruct any man, exactly, regarding what to look for—he's just told to investigate in any way possible the effect we have at hand. And in each of the five cases he's come out staring mad, and died within hours. I guess Thompson was even sedated quickly enough to last until he got home, but as soon as the sedation wore off he went like the others. Every one of them died of the same thing. There were no external marks, and no indication of injury. Ultimately, each of them died of shock. Or fear. Or both."

The doctor cleared his throat. "I believe we're dealing solely with a matter of adjustment. Apparently these men have been faced with something that they've never met before. Something completely foreign to their experience, and something with which their nervous systems cannot cope. They've run into something so startling, or frightening, or stupendous, that their minds saw no escape but total and immediate breakdown. It was adjust or col-

lapse, and being unable to adjust, they collapsed, and the shock was too much for their systems. So they died. Of fear, if you will—there's nothing else to blame."

The director toyed with his pipe. "And your recommendations, Dr. Marks? Shall we just keep feeding good men to this thing?"

"Not quite. As I said, it's a problem in adjustment. We need a man with a high adjustment threshold—a *very* high threshold. We need a man with a cast-iron nervous system, a nervous system that can adjust to *anything,* regardless of impact or excitation of any sort. Give us that man, and I'd agree to another stab at it."

The director knocked out his pipe and placed it in his pocket with finality. "Well, Mac?" he said gently.

McEvoy smiled. "Down in the recording vault," he said quietly, "we have a cross-index file. I think I'll spend a sleepless night or two down there."

Ned McEvoy took the ball from his briefcase and laid it on the desk before the thin man with the pince-nez. "What does that look like to you, Dr. Bamford?"

The man examined it closely, and looked up smiling. "It looks like a tennis ball that someone has turned inside out," he replied.

McEvoy chuckled. "And how would you go about turning a tennis ball inside out, Dr. Bamford?"

"Can't say I know, offhand." He looked quizzically at McEvoy. "What can I do for you, doctor?"

"You've heard the old story of the goats that were carried across the Andes on muleback—and all died of fright?"

"Of course."

"Well, we have the same problem in my laboratory. Only we have men dying of fright."

Dr. Bamford's eyebrows went up. "Adjustment?" he ventured.

"We think so. About six months ago we ran into a peculiar snag in the work I was supervising. The Institute of Physics has been concerned for several years with problems involving extremely low temperatures—nearly absolute zero temperatures. The work we originally planned called theoretically for an approach within six decimals of complete cessation of molecular motion. That involves a temperature of one millionth of one degree Kelvin. And we reached it."

McEvoy fingered his collar nervously, and shifted his weight in the chair. "Matter of fact, we did even better. Our pumps began acting up as we approached a thousandth of a degree. What happened, we think, was a reversal of the Franklinson effect in the extremes of high temperature, where the temperature nearly doubles quite suddenly with a tremendous molecular expansion. Our temperature took a sudden startling drop."

"I'm not quite sure I follow you," said Dr. Bamford. "From one degree Kelvin, just where does the temperature drop?"

McEvoy scowled. "A good question," he said. "I don't know, to be quite frank. Zero Kelvin is a relative and hypothetical point at which all molecular motion ceases. Below zero Kelvin, if such were possible, one could reasonably expect negative molecular motion. That may have been what we obtained; we don't know. But we certainly observed a change. The tungsten block we were treating simply evaporated. Vanished. The temperature recording device vanished. All we could see in the vault was a small glowing hole in the corner of the room where the block had been. Nothing in it, Dr. Bamford — *nothing*. And the hole, seen at a distance, appeared very suspiciously like a—hypercube."

The doctor was silent for a long moment. "Shades of Satan," he murmured quietly. "You investigated—?"

"We surely did. We're still trying. It looks as if we have a four-dimensional projection in our three-dimensional space—a corner, or an edge, of four-dimensional space. We've tried everything, and we're getting nowhere. So far we've lost five crackerjack technicians investigating. We're no better off than when we started."

"What about this?" The doctor pointed to the tennis ball.

"One characteristic of this thing we *are* able to investigate. Pretty good evidence, I think, that we have a reverse Franklinson effect. A small area of really—not *temperature*, that implies positive molecular motion—you might say *un*temperature where molecular motion is present, but negative. That tennis ball was quite ordinary when it was placed in the area of this hypercube. It came out the way you see it. I have a pencil that I inserted halfway into the area —and it came out with a thin layer of graphite all around a solid wooden core. We dropped a mouse into it, and . . . well, it was something of a mess. And it was still alive—"

Dr. Bamford toyed with the odd tennis ball for a moment. "And your investigators can't look at it, or examine it—this little area of space," he said at length. "Or if they do look at it they can't adjust to what they see, or describe it. It frightens them, or shocks them, into physical and mental breakdown. Right?"

McEvoy sighed. "Right. Now it appears to us that it is just what you mentioned: adjustment. Our investigators have undergone a terrific overload, somehow—crossed their adjustment thresholds, and couldn't go on. We need a man with a high adjustment threshold—very high. We need a tough nervous system, tougher than any we've seen before. Such a man might be able to investigate, and at least come out alive."

The doctor walked over to a filing cabinet in the corner. "Do you know what we've been doing in this laboratory?" he asked.

"Vaguely."

"Patterns of adjustment. Given a new or altered environment, one man can adjust and survive while another breaks down and withdraws to avoid

facing the new circumstances. Why? More important, just what *is* the mechanism of adjustment? How does an individual manage to change his thinking to cope with a new environmental situation? And why can one mind work the change when another can't? That's what we've been working on."

McEvoy touched a lighter to his cigarette. "And your results?"

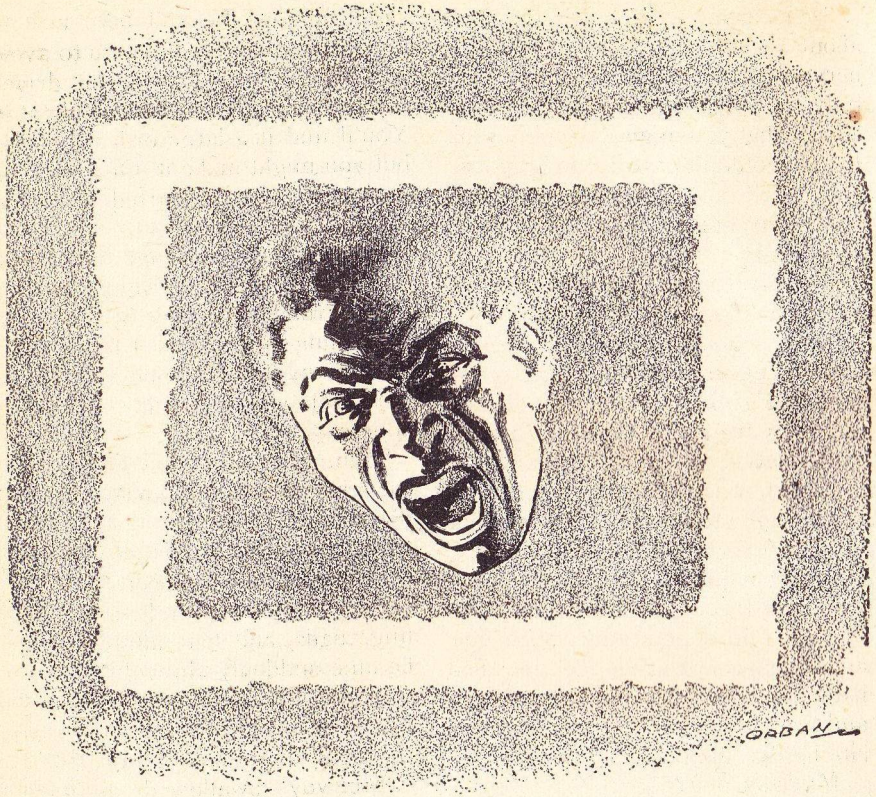
The doctor shrugged his shoulders. "We have answers to the questions, all right. Evidence indicates that they are right. Consider a man in a situation where a portion of his environment is suddenly and consistently foreign to his experience. In his mind is data which he has used for survival in his old familiar environment. In the old environment that data used in computations gave the right answers. But in the new environment he gets the wrong answers. The data is no good, and the wrong answers noticeably hinder his survival.

"There are two things he can do. He can refuse to think out or understand the reason for the false data, continue to attempt survival on the wrong-answer data, and end up with anything from a mild neurosis to a paranoic withdrawal, depending on the nonsurvival value of the wrong answers he is getting. Or he can take the wrong-answer data, recognize it as such, and simply chuck it in a dead file as 'no good under these circumstances' and proceed to search for new data. Relating the recognizable part of his environment to the unrecognizable part, he accumulates new data with which to compute; as soon as all the wrong-answer data is out of the way, and as soon as all necessary new data is collected, that individual is adjusted. Physiological and endocrine adjustments follow on the heels of the mental adjustment, if the new environment requires it, or if the individual's physiology allows it. But wherever it is possible to relate an unknown quantity in environment to already known quantities, the mental adjustment is theoretically possible.

"Some people are able to make the necessary switch quickly and easily; others stumble, get wrong answers to begin with, end up with even more dangerously wrong answers and data than before, and become so confused and frightened that their analysis shuts down, and adjustment is impossible. The adjustment threshold is high or low according to the ability of the individual to relate the unknown to the known, to make some sort of computational sense out of the environment he is in."

"What you mention," said McEvoy, "is an environment only partly changed. What would happen if such a high-threshold person were suddenly faced with a completely foreign and totally incomprehensible environment? No relation of any sort to anything in his previous environment. No place to stand. What would he do then?"

Dr. Bamford took the tennis ball from the desk and examined it for several moments before answering.



Then he looked up sharply at McEvoy and said, "I wouldn't care to be responsible, myself."

McEvoy's face fell. "No chance of success?"

"Oh, I didn't say that. Take a person with a very high threshold, with a keen analytical mind, and he might find something in the incomprehensible environment upon which to work. You'd be amazed at the overload the human nervous system can take without cracking. We've tried every type of laboratory-induced neurosis we could devise on our workers—ever try living on a forty-hour day? It's an experience. Varied temperatures, disorientation, persistent and irritating noise effects, distorted spatial environment, negative transfer, induced successive dilemmas—everything. We've weeded out dozens. When one worker cracks we treat him and send him home. And some don't crack—"

"We need such a person."

"We have such a person. Just about the most perfectly adjustable nervous setup we've worked with—fully co-operative, intelligent – just about what you might be looking for. But I wouldn't care to be responsible."

McEvoy nodded excitedly. "Would he be willing to try this with us?"

Dr. Bamford smiled. "She might. Why don't you ask her?"

Gail sat in the consulting room, composedly leafing through a fashion magazine when McEvoy was introduced. She was a pretty girl, well groomed, with an easy smile and a most captivating air of unconcern about her. "How old are you, Gail?" McEvoy inquired.

"Almost nineteen," she grinned. "Dr. Bamford says you might have another test for me." She leaned back in her chair, completely at ease, and watched McEvoy curiously as she lighted a cigarette.

McEvoy didn't grin. "Maybe we have. We want to warn you, it may be a hard one. We want you to realize what you may be getting into."

The girl yawned. "O.K. Let's have it."

"We have a small cube we want you to observe for us. It isn't like anything you've ever seen before, and you may have difficulty, for it may affect you in a totally unforeseen manner. We think this cube—it just hangs all by itself in space and glows a little—may be a three-dimensional slice through a four-dimensional space. It doesn't look like anything at all, and we haven't been able to look at it squarely; it seems to avoid us. Several men have been driven completely mad—just by looking at it. You'll find it a large order, I think, but you might make it. Of course we want your whole-hearted co-operation."

The girl stared at him in disbelief. "You mean you just want me to go into a room and look at a box or something? What's in it for me?"

McEvoy looked annoyed. "Why, whatever you think it's worth, of course—"

"Oh, I wouldn't have any idea," the girl interrupted innocently, her eyes wide.

McEvoy smiled. "How would ten thousand dollars suit you?"

Gail looked carefully at her red fingernails, and her indifferent eyes became suddenly shrewd. "For getting my mind jogged all over the place? No soap, mister. A hundred thousand might sound more like it."

McEvoy swallowed hard and looked helplessly at Dr. Bamford. The doctor merely smiled.

"All right," said McEvoy finally. "One hundred thousand, when you produce—"

"Before I go in," the girl interrupted placidly.

"All right, before you go in. But remember—this little 'box' you're going to look at is a rather dangerous thing. It might effect you most strangely—"

"So do shock treatments," she cut in dryly. "Mister, after all the garbage I've had thrown at me in the

past five years, I think I could take anything. You name it."

"Yes," said McEvoy, sourly. "I think you could."

Dr. Marks fidgetted and wiped his hands nervously on his pants. "Looks all right to me, Mac. I only hope we have what we want."

McEvoy, his hair mussed and his pants rumpled, breathed a quiet sigh. "*You* hope so, huh? At that price, we'd better have. Doc, if this doesn't go across, I'm going in there next time. There must be some way—"

Fritzer scowled. "You just think you're going in there," he said. "You really aren't, you know. This girl is the last, and that's straight from the top. If she goes—" he spread his hands eloquently.

Gail stood up and fluffed her skirt. "Haven't you finished my coffin yet?" she asked sourly. "Honestly, you'd think this was an ordeal or something. Isn't it about time to start?"

McEvoy flipped the intercom switch impatiently. "How about it Franky? Got it about down?"

"Take a look, Mac. It should be clear down."

McEvoy slipped open the vault and peered in. The room was dark except for a small glowing area about three feet from the floor on the far right-hand side of the chamber. "All right, Gail," he said quietly. "Ready? It's all yours. Keep us posted on the intercom regularly. Keep it on all the time."

She went into the room, and the latch clicked heavily behind her. McEvoy took a seat at the intercom, placed pad and pencil before him, and clenched his fists.

"Well, I'm in here," said the girl. "Now what? Just go over and look at it?"

"That's right. Just look. Approach it carefully."

"It's about six inches square—almost square—and it glows like phosphorous."

There was a forty-second silence. "How're you coming?" asked McEvoy.

"This is very odd . . . it's . . . I can't describe it. But I think . . . wait a minute—"

Long silence.

"Gail!"

No answer. "Gail! By all that's holy!" McEvoy slammed down the master switch and made frantically for the vault door, kicking a chair aside as he went. The latch on the door caught and held tight under his urgent attack, and he banged it ineffectually with his fists, the urgency of immediate action driving through his mind. "Gail! Hold on! We're coming!"

The last thing she heard was McEvoy's voice, and the banging on the door. Then suddenly she'd slipped —inside. The deathly stillness settled over her like a blanket. No sound. No possibility of any sound. She could barely breathe.

She wanted to scream, but she knew she couldn't, for no screaming was possible here. She could see

about her, clearly, but with no comprehension. A foreign place, if it was a place—alien, incomprehensible. Her mind twisted, and fear began creeping up her legs and arms—but she had no legs and arms, really. There was nothing here, *nothing* to grasp, to anchor her against the whirling tide of hopeless revulsion and withdrawal.

But of course there was something. SHE WAS ALIVE! What more did she need? She was here, her mind was working, her bodily functions were continuing. She was alive, she was here, obviously—

That was her anchor!

Her mind centered and narrowed along that single line. Throw out all other data, start fresh—not just some, not part, but *everything*. She was alive, she was here, and this unbelievable place was here, too. They were coexistent. File out all other data, dead-file it. The effort was stupendous, but she began, slowly, to understand.

There was substance here, matter, solidity. She was—different, somehow; her body was not right. Part of it was gone, and part was distorted and situated several feet away. The vault was gone, of course, and there was dead stillness, but she could see the corner around which she had come to get here. Mustn't go back the way she came. Any other way? Of course! Anywhere she wanted to she could turn the—corner—and be back.

The twists and angles were not right, the way they should be. Three perfectly parallel lines which met each other at ninety-degree angles to form a perfect square with seven triangular sides—

It couldn't be!

"Why not? It is. I'm here. It's here. ADJUST TO IT!"

The data, the new data, cleared in her mind. This would make no sense to anyone when she went back. Her own practiced mind was reeling to maintain control; she knew that no one else could adjust to this. McEvoy? She laughed to herself. No wonder his workers went mad. She would remember, she could report, but her report would make no sense to McEvoy or anyone else. She alone could investigate, but even she would never be able to correlate the universe outside that little glowing cube, where McEvoy was, and the one—inside, where she was. They had the minds, the analytical power, but the data in their minds could never be attenuated as she had attenuated hers, and even she couldn't do anything with what she observed. The only human mind that could actually investigate this place and correlate it with the universe outside would have to be a perfect analytical mind *without any data!*

Where in the universe could she find a human being with a perfect analytical mind, sharp, unhindered, high in computational potential, with absolutely no conscious data contained in it? The answer came to her with blinding clarity, and she knew the answer to the investigation

problem. And the solution to the threshold.

A new-born baby!

Start him from birth, first on one side, then on the other. Let him grow up, first inside, then outside. Two sets of survival data. Two mutually incomprehensible worlds. He would live in either with equal ease. And he would learn to relate them one to the other.

Then the investigation could begin.

Gail collected herself and looked for an entrance back to the outside. McEvoy must never know now, he must be carefully and fully educated to the idea. Authorities would have to be won over. She knew that this was McEvoy's last chance. If she could prevent him from finding out, for a while, his investigation of the cube would have to be dropped. Until she could prepare the way.

Paranoic withdrawal would appear logical, to McEvoy. Infuriating, but logical. It would block him, for the time being. And if he tried to force her—she could simply turn the corner and come back here. Inside. She wouldn't need an entrance any more, for *any place* could provide an entrance, and she knew now where to look.

She chose an entrance near the place where she had come through. As she turned the corner, she heard the banging on the door, and McEvoy's frantic voice shouting, "Gail! Hold on! We're coming!"

McEvoy saw her standing in the far right-hand corner of the room, staring at the glowing space which had faded as he watched it and blinked out.

"Gail, are you all right?"

She didn't answer him. She didn't even see him. Her eyes were fixed on a point in space in the center of the room, and she merely stood and breathed quietly.

They carried her into the control room, and finally bent her legs to sit her on a chair. Dr. Marks snapped on his pocket flashlight. After a few moments of examination he sighed disgustedly. "Typical," he muttered. "Complete, absolute paranoic withdrawal."

He lifted her arm and released it; it remained suspended in midair as she gazed expressionlessly ahead. "Cataleptic trance. Call it what you will. She's out."

"You mean she'll go like the rest?"

"Oh, no. She wont die. She'll just be like this for weeks, maybe months, maybe until she dies. She's just withdrawn from our world entirely."

McEvoy stared at her, unbelievingly, his ruddy face turning purple. "You mean you think she has the solution?"

"Of course she has the solution!" Marks snapped. "Her mind has apparently just decided that what she saw she isn't going to tell—"

"Why, you cheat!" McEvoy snarled, whirling on the girl. "You sneaky little cheat!" He slapped her sharply across the face.

For a brief instant anger flooded

her blank face; her eyes darkened, and the suspended hand tightened and clawed viciously at McEvoy's face. Then just as suddenly she regained her fixed stare.

McEvoy groaned in pain and grated his teeth. "Better get her into a strait jacket," he growled. "She's like a mad cat."

"Good idea," agreed Dr. Marks. We can put her down in number three cubicle until we decide what to do."

Down in the cubicle the girl sat on the bunk, staring at nothing, motionless, barely breathing. "What can we do?" asked McEvoy.

"We can try to break the catalepsy, somehow. She undoubtedly has the answer—the whole solution to our problem, locked up in that brain of hers. She got it, all right, and decided to withdraw. Tomorrow we'll start some shock on her and see—we might just possibly jolt her out of the catalepsy and still retain her memory. Just possibly—"

They left her sitting on the bed, and walked out in the hall. As he was about to close and lock the cubicle door McEvoy took a last glance inside, and let out a strangled shout.

The cubicle was empty.

THE END

THE POINT OF THE BRASS TACKS

Brass Tacks is dedicated to the proposition that discussing science, fiction, science-fiction, science-fictioneers, and the general whichness of the why is of general interest. And to the proposition that, since the reader who lays down his cash money hires the author, the artist and the editor, he has a right—and a write—to make comments and suggestions.

For the information of all and sundry, incidentally, it is the nickles, dimes and quarters of the cash customer that pays the author, the artist, the editor, and the typesetters; advertising does not. You, reader, bought it—it's yours.

But as a result, Brass Tacks cannot, fairly, handle any message not of the most general interest. We cannot print an announcement that the Central City Science-Fiction Club is going to hold a meeting on the 31st of February on the 197th floor of the Pipsqueak Building. Not when only about 0.1% of our readership lives within reasonable distance of the Pipsqueak Building. The residents of New York and Los Angeles are looking at a blank place in the page, so far as they are concerned.

The same applies to Joe Doakes' offer to sell ten copies of the 1941 ASF. Under very rare, very real emergenccy situations we have published a personal message or so. Otherwise—Brass Tacks is never personal. It's a free-for-all debating platform. Come on in with any general cracks you've got—and don't yell if *your* corns get walked on!

THE EDITOR.

PROTECTED SPECIES

BY H. B. FYFE

When men arrived on the planet, they found ruins, and a few hard-to-see aliens. And they decided to protect the species — which was a mistaken idea based on inadequate understanding of the facts.

Illustrated by Welker

The yellow star, of which Torang was the second planet, shone hotly down on the group of men viewing the half-built dam from the heights above. At a range of eighty million miles, the effect was quite Terran, the star being somewhat smaller than Sol.

For Jeff Otis, fresh from a hop through space from the extra-bright star that was the other component of the binary system, the heat was enervating. The shorts and light shirt supplied him by the planet co-ordinator were soaked with perspiration. He mopped his forehead and turned to his host.

"Very nice job, Finchley," he complimented. "It's easy to see you have things well in hand here."

Finchley grinned sparingly. He had a broad, hard, flat face with tight lips and mere slits of blue eyes. Otis had been trying ever since the previous morning to catch a revealing expression on it.

He was uneasily aware that his own features were too frank and open for an inspector of colonial installations. For one thing, he had too many lines and hollows in his face, a result of being chronically underweight from space-hopping among the sixteen planets of the binary system.

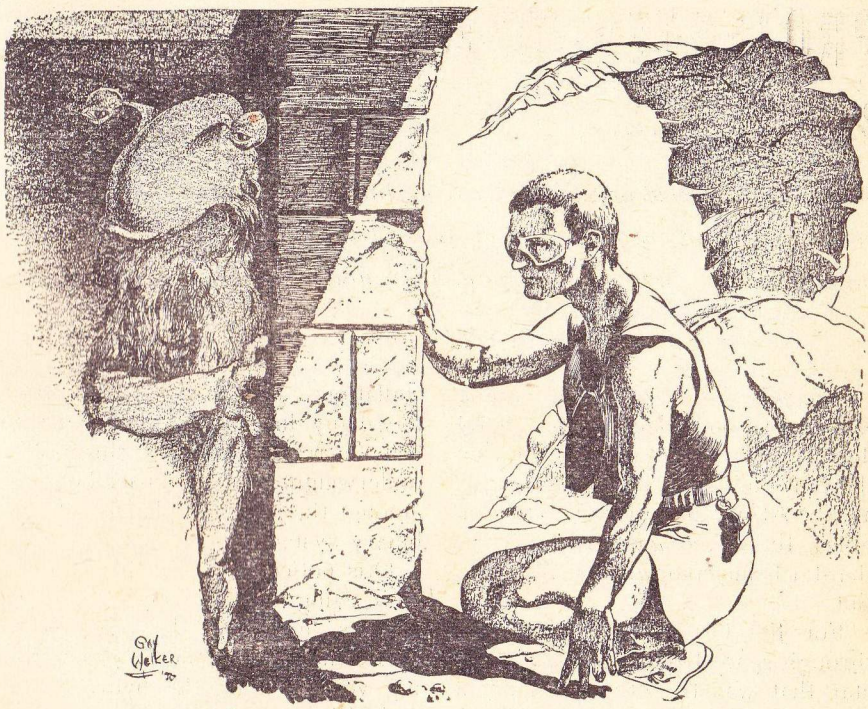
Otis noticed that Finchley's aides were eying him furtively.

"Yes, Finchley," he repeated to break the little silence, "you're doing very well on the hydroelectric end. When are you going to show me the capital city you're laying out?"

"We can fly over there now," answered Finchley. "We have tentative boundaries laid out below those pre-colony ruins we saw from the 'copter."

"Oh, yes. You know, I meant to remark as we flew over that they looked a good deal like similar remnants on some of the other planets."

He caught himself as Finchley's thin lips tightened a trifle more. The co-ordinator was obviously trying to be patient and polite to an official from whom he hoped to get a good report, but Otis could see he would much rather be going about his busi-



ness of building up the colony.

He could hardly blame Finchley, he decided. It was the fifth planetary system Terrans had found in their expansion into space, and there would be bigger jobs ahead for a man with a record of successful accomplishments. Civilization was reaching out to the stars at last. Otis supposed that he, too, was some sort of pioneer, although he usually was too busy to feel like one.

"Well, I'll show you some photos later," he said. "Right now, we—Say, why all that jet-burning down there?"

In the gorge below, men had dropped their tools and seemed to be charging toward a common focal point. Excited yells carried thinly up the cliffs.

"Ape hunt, probably," guessed one of Finchley's engineers.

"Ape?" asked Otis, surprised.

"Not exactly," corrected Finchley patiently. "That's common slang for what we mention in reports as Torangs. They look a little like big, skinny, gray apes; but they're the only life large enough to name after the planet."

Otis stared down into the gorge. Most of the running men had given up and were straggling back to their

work. Two or three, brandishing pistols, continued running and disappeared around a bend.

"Never catch him now," commented Finchley's pilot.

"Do you just let them go running off whenever they feel like it?" Otis inquired.

Finchley met his curious gaze stolidly.

"I'm in favor of anything that will break the monotony, Mr. Otis. We have a problem of morale, you know. This planet is a key colony, and I like to keep the work going smoothly."

"Yes, I suppose there isn't much for recreation yet."

"Exactly. I don't see the sport in it myself but I let them. We're up to schedule."

"Ahead, if anything," Otis placated him. "Well, now, about the city?"

Finchley led the way to the helicopter. The pilot and Otis waited while he had a final word with his engineers, then they all climbed in and were off.

Later, hovering over the network of crude roads being leveled by Finchley's bulldozers, Otis admitted aloud that the location was well-chosen. It lay along a long, narrow bay that thrust in from the distant ocean to gather the waters of the same river that was being dammed some miles upstream.

"Those cliffs over there," Finchley pointed out, "were raised up since the end of whatever civilization used to be here—so my geologist tells me. We can fly back that way, and you can see how the ancient city was once at the head of the bay."

The pilot climbed and headed over the cliffs. Otis saw that these formed the edge of a plateau. At one point, their continuity was marred by a deep gouge.

"Where the river ran thousands of years ago," Finchley explained.

They reached a point from which the outlines of the ruined city were easily discerned. From the air, Otis knew, they were undoubtedly plainer than if he had been among them.

"Must have been a pretty large place," he remarked. "Any idea what sort of beings built it or what happened to them?"

"Haven't had time for that yet," Finchley said. "Some boys from the exploration staff poke around in there every so often. Best current theory seems to be that it belonged to the Torangs."

"The *animals* they were hunting before?" asked Otis.

"Might be. Can't say for sure, but the diggers found signs the city took more of a punch than just an earthquake. Claim they found too much evidence of fires, exploded missiles, and warfare in general—other places as well as here. So . . . we've been guessing the Torangs are degenerated descendents of the survivors of some interplanetary brawl."

Otis considered that.

"Sounds plausible," he admitted, "but you ought to do something to

make sure you are right."

"Why?"

"If it *is* the case, you'll have to stop your men from hunting them; degenerated or not, the Colonial Commission has regulations about contact with any local inhabitants."

Finchley turned his head to scowl at Otis, and controlled himself with an obvious effort.

"Those *apes?*" he demanded.

"Well, how can you tell? Ever try to contact them?"

"Yes! At first, that is; before we figured them for animals."

"And?"

"Couldn't get near one!" Finchley declared heatedly. "If they had any sort of half-intelligent culture, wouldn't they let us make *some* sort of contact?"

"Offhand," admitted Otis, "I should think so. How about setting down a few minutes? I'd like a look at the ruins."

Finchley glared at his wrist watch, but directed the pilot to land at a cleared spot. The young man brought them down neatly and the two officials alighted.

Otis, glancing around, saw where the archaeologists had been digging. They had left their implements stacked casually at the site—the air was dry up here and who was there to steal a shovel?

He left Finchley and strolled around a mound of dirt that had been cleared away from an entrance to one of the buildings. The latter had been built of stone, or at least faced with it. A peep into the dim excavation led him to believe there had been a steel framework, but the whole affair had been collapsed as if by an explosion.

He walked a little way further and reached a section of presumably taller buildings where the stone ruins thrust above the sandy surface. After he had wandered through one or two arched openings that seemed to have been windows, he understood why the explorers had chosen to dig for their information. If any covering or decoration had ever graced the walls, it had long since been weathered off. As for ceiling or roof, nothing remained.

"Must have been a highly developed civilization just the same," he muttered.

A movement at one of the shadowed openings to his right caught his eye. He did not remember noticing Finchley leave the helicopter to follow him, but he was glad of a guide.

"Don't you think so?" he added.

He turned his head, but Finchley was not there. In fact, now that Otis was aware of his surroundings, he could hear the voices of the other two mumbling distantly back by the aircraft.

"Seeing things!" he grumbled, and started through the ancient window.

Some instinct stopped him half a foot outside.

Come on, Jeff, he told himself, *don't be silly! What could be there? Ghosts?*

On the other hand, he realized,

there were times when it was just as well to rely upon instinct—at least until you figured out the origin of the strange feeling. Any spaceman would agree to that. The man who developed an animal sixth sense was the man who lived longest on alien planets.

He thought he must have paused a full minute or more, during which he had heard not the slightest sound except the mutter of voices to the rear. He peered into the chamber, which was about twenty feet square and well if not brightly lit by reflected light.

Nothing was to be seen, but when he found himself turning his head stealthily to peer over his shoulder, he decided that the queer sensation along the back of his neck meant something.

Wait, now, he thought swiftly. *I didn't see quite the whole room.*

The flooring was heaped with wind-bared rubble that would not show footprints. He felt much more comfortable to notice himself thinking in that vein.

At least, I'm not imagining ghosts, he thought.

Bending forward the necessary foot, he thrust his head through the opening and darted a quick look to left, then to the right along the wall. As he turned right, his glance was met directly by a pair of very wide-set black eyes which shifted inward slightly as they got his range.

The Torang about matched his own six-feet-two, mainly because of elongated, gibbonlike limbs and a similarly crouching stance. Arms and legs, covered with short, curly, gray fur, had the same general proportions as human limbs, but looked half again too long for a trunk that seemed to be ribbed all the way down. Shoulder and hip joints were compactly lean, rather as if the Torang had developed on a world of lesser gravity than that of the human.

It was the face that made Otis stare. The mouth was toothless and probably constructed more for sucking than for chewing. But the eyes! They projected like ends of a dumbbell from each side of the narrow skull where the ears should have been, and focused with obvious mobility. Peering closer, Otis saw tiny ears below the eyes, almost hidden in the curling fur of the neck.

He realized abruptly that his own eyes felt as if they were bulging out, although he could not remember having changed his expression of casual curiosity. His back was getting stiff also. He straightened up carefully.

"Uh . . . hello," he murmured, feeling unutterably silly but conscious of some impulse to compromise between a tone of greeting for another human being and one of pacification to an animal.

The Torang moved then, swiftly but unhurriedly. In fact, Otis later decided, deliberately. One of the long arms swept downward to the rubble-strewn ground.

The next instant, Otis jerked his head back out of the opening as a stone whizzed past in front of his nose.

"Hey!" he protested involuntarily.

There was a scrabbling sound from within, as of animal claws churning to a fast start among the pebbles. Recovering his balance, Otis charged recklessly through the entrance.

"I don't know why," he admitted to Finchley a few minutes later. "If I stopped to think how I might have had my skull bashed in coming through, I guess I'd have just backed off and yelled for you."

Finchley nodded, but his narrow gaze seemed faintly approving for the first time since they had met.

"He was gone, of course," Otis continued. "I barely caught a glimpse of his rump vanishing through another window."

"Yeah, they're pretty fast," put in Finchley's pilot. "In the time we've been here, the boys haven't taken more than half a dozen. Got a stuffed one over at headquarters though."

"Hm-m-m," murmured Otis thoughtfully.

From their other remarks, he learned that he had not noticed everything, even though face to face with the creature. Finchley's mentioning the three digits of the hands or feet, for instance, came as a surprise.

Otis was silent most of the flight back to headquarters. Once there, he disappeared with a perfunctory excuse toward the rooms assigned him.

That evening, at a dinner which Finchley had made as attractive as was possible in a comparatively raw and new colony, Otis was noticeably sociable. The co-ordinator was gratified.

"Looks as if they finally sent us a regular guy," he remarked behind his hand to one of his assistants. "Round up a couple of the prettier secretaries to keep him happy."

"I understand he nearly laid hands on a Torang up at the diggings," said the other.

"Yep, ran right at it bare-handed. Came as close to bagging it as anybody could, I suppose."

"Maybe it's just as well he didn't," commented the assistant. "They're big enough to mess up an unarmed man some."

Otis, meanwhile and for the rest of the evening, was assiduously busy making acquaintances. So engrossed was he in turning every new conversation to the Torangs and asking seemingly casual questions about the little known of their habits and possible past, that he hardly noticed receiving any special attentions. As a visiting inspector, he was used to attempts to entertain and distract him.

The next morning, he caught Finchley at his office in the sprawling one-story structure of concrete and glass that was colonial headquarters.

After accepting a chair across the desk from the co-ordinator, Otis told him his conclusions. Finchley's narrow eyes opened a trifle when he heard the details. His wide, hard-muscled face became slightly pink.

"Oh, for—! I mean, Otis, why must you make something big out of

it? The men very seldom bag one anyway!"

"Perhaps because they're so rare," answered Otis calmly. "How do we know they're not intelligent life? Maybe if you were hanging on in the ruins of your ancestors' civilization, reduced to a primitive state, *you'd* be just as wary of a bunch of loud Terrans moving in!"

Finchley shrugged. He looked vaguely uncomfortable, as if debating whether Otis or some disgruntled sportsman from his husky construction crews would be easier to handle.

"Think of the overall picture a minute," Otis urged. "We're pushing out into space at last, after centuries of dreams and struggles. With all the misery we've seen in various colonial systems at home, we've tried to plan these ventures so as to avoid old mistakes."

Finchley nodded grudgingly. Otis could see that his mind was on the progress charts of his many projects.

"It stands to reason," the inspector went on, "that some day we'll find a planet with intelligent life. We're still new in space, but as we probe farther out, it's bound to happen. That's why the Commission drew up rules about native life forms. Or have you read that part of the code lately?"

Finchley shifted from side to side in his chair.

"Now, look!" he protested. "Don't go making *me* out a hardboiled vandal with nothing in mind but exterminating everything that moves on all Torang. *I* don't go out hunting the apes!"

"I know, I know," Otis soothed him. "But before the Colonial Commission will sanction any destruction of indigenous life, we'll have to show —*besides* that it's not intelligent— that it exists in sufficient numbers to avoid extinction."

"What do you expect me to do about it?"

Otis regarded him with some sympathy. Finchley was the hard-bitten type the Commission needed to oversee the first breaking-in of a colony on a strange planet, but he was not unreasonable. He merely wanted to be left alone to handle the tough job facing him.

"Announce a ban on hunting Torangs," Otis said. "There must be something else they can go after."

"Oh, yes," admitted Finchley. "There are swarms of little rabbit-things and other vermin running through the brush. But, I don't know—"

"It's standard practice," Otis reminded him. "We have many a protected species even back on Terra that would be extinct by now, only for the game laws."

In the end, they agreed that Finchley would do his honest best to enforce a ban provided Otis obtained a formal order from the headquarters of the system. The inspector went from the office straight to the communications center, where he filed a long report for the chief co-ordinator's office in the other part of the binary system.

It took some hours for the reply to reach Torang. When it came that afternoon, he went looking for Finchley.

He found the co-ordinator inspecting a newly finished canning factory on the coast, elated at the completion of one more link in making the colony self-sustaining.

"Here it is," said Otis, waving the message copy. "Signed by the chief himself. 'As of this date, the apelike beings known as Torangs, indigenous to planet number and so forth, are to be considered a rare and protected species under regulations and so forth et cetera.' "

"Good enough," answered Finchley with an amiable shrug. "Give it here, and I'll have it put on the public address system and the bulletin boards."

Otis returned satisfied to the helicopter that had brought him out from headquarters.

"Back, sir?" asked the pilot.

"Yes . . . *no!* Just for fun, take me out to the old city. I never did get a good look the other day, and I'd like to before I leave."

They flew over the plains between the sea and the upjutting cliffs. In the distance, Otis caught a glimpse of the rising dam he had been shown the day before. This colony would go well, he reflected, as long as he checked up on details like preserving native life forms.

Eventually, the pilot landed at the same spot he had been taken on his previous visit to the ancient ruins. Someone else was on the scene today. Otis saw a pair of men he took to be archaeologists.

"I'll just wander around a bit," he told the pilot.

He noticed the two men looking at him from where they stood by the shovels and other equipment, so he paused to say hello. As he thought, they had been digging in the ruins.

"Taking some measurements in fact," said the sunburned blond introduced as Hoffman. "Trying to get a line on what sort of things built the place."

"Oh?" said Otis, interested. "What's the latest theory?"

"Not so much different from us," Hoffman told the inspector while his partner left them to pick up another load of artifacts.

"Judging from the size of the rooms, height of doorways, and such stuff as stairways," he went on, "they were pretty much our size. So far, of course, it's only a rough estimate."

"Could be ancestors of the Torangs, eh?" asked Otis.

"Very possible, sir," answered Hoffman, with a promptness that suggested it was his own view. "But we haven't dug up enough to guess at the type of culture they had, or draw any conclusions as to their psychology or social customs."

Otis nodded, thinking that he ought to mention the young fellow's name to Finchley before he left Torang. He excused himself as the other man returned with a box of some sort of scraps the pair had un-

earthed, and strolled between the outlines of the untouched buildings.

In a few minutes, he came to the section of higher structures where he had encountered the Torang the previous day.

"Wonder if I should look in the same spot?" he muttered aloud. "No . . . that would be the *last* place the thing would return to . . . unless it had a lair thereabouts—"

He stopped to get his bearings, then shrugged and walked around a mound of rubble toward what he believed to be the proper building.

Pretty sure this was it, he mused. *Yes, shadows around that window arch look the same . . . same time of day—*

He halted, almost guiltily, and looked back to make sure no one was observing his futile return to the scene of his little adventure. After all, an inspector of colonial installations was not supposed to run around ghost-hunting like a small boy.

Finding himself alone, he stepped briskly through the crumbling arch *—and froze in his tracks.*

"I am honored to know you," said the Torang in a mild, rather buzzing voice. "We thought you possibly would return here."

Otis gaped. The black eyes projecting from the sides of the narrow head tracked him up and down, giving him the unpleasant sensation of being measured for an artillery salvo.

"I am known as Jal-Ganyr," said the Torang. "Unless I am given incorrect data, you are known as Jeff-Otis. That is so."

The last statement was made with almost no inflection, but some still-functioning corner of Otis' mind interpreted it as a question. He sucked in a deep breath, suddenly conscious of having forgotten to breathe for a moment.

"I didn't know . . . yes, that is so . . . I didn't know you Torangs could speak Terran. Or anything else. How—?"

He hesitated as a million questions boiled up in his mind to be asked. Jal-Ganyr absently stroked the gray fur of his chest with his three-fingered left hand, squatting patiently on a flat rock. Otis felt somehow that he had been allowed to waste time mumbling only by grace of disciplined politeness.

"I am not of the Torangs," said Jal-Ganyr in his wheezing voice. "I am of the Myrbs. You would possibly say Myrbii. I have not been informed."

"You mean that is your name for yourselves?" asked Otis.

Jal-Ganyr seemed to consider, his mobile eyes swiveling inward to scan the Terran's face.

"More than that," he said at last, when he had thought it over. "I mean I am of the race originating at Myrb, not of this planet."

"Before we go any further," insisted Otis, "tell me, at least, how you learned our language!"

Jal-Ganyr made a fleeting gesture. His "face" was unreadable to the Terran, but Otis had the impression he had received the equivalent of a smile and a shrug.

"As to that," said the Myrb, "I possibly learned it before you did. We have observed you a very long time. You would unbelieve how long."

"But then—" Otis paused. That must mean before the colonists had landed on this planet. He was half-afraid it might mean before they had reached this sun system. He put aside the thought and asked, "But then, why do you live like this among the ruins? Why wait till now? If you had communicated, you could have had our help rebuilding—"

He let his voice trail off, wondering what sounded wrong. Jal-Ganyr rolled his eyes about leisurely, as if disdaining the surrounding ruins. Again, he seemed to consider all the implications of Otis' questions.

"We picked up your message to your chief," he answered at last. "We decided time is to communicate with one of you.

"We have no interest in rebuilding," he added. "We have concealed quarters for ourselves."

Otis found that his lips were dry from his unconsciously having let his mouth hang open. He moistened them with the tip of his tongue, and relaxed enough to lean against the wall.

"You mean my getting the ruling to proclaim you a protected species?" he asked. "You have instruments to intercept such signals?"

"I do. We have," said Jal-Ganyr simply. "It has been decided that you have expanded far enough into space to make necessary we contact a few of the thoughtful among you. It will possibly make easier in the future for our observers."

Otis wondered how much of that was irony. He felt himself flushing at the memory of the "stuffed specimen" at headquarters, and was peculiarly relieved that he had not gone to see it.

I've had the luck, he told himself. *I'm the one to discover the first known intelligent beings beyond Sol!*

Aloud, he said, "We expected to meet someone like you eventually. But why have you chosen me?"

The question sounded vain, he realized, but it brought unexpected results.

"Your message. You made in a little way the same decision we made in a big way. We deduce that you are one to understand our regret and shame at what happened between our races . . . long ago."

"Between—?"

"Yes. For a long time, we thought you were all gone. We are pleased to see you returning to some of your old planets."

Otis stared blankly. Some instinct must have enabled the Myrb to interpret his bewildered expression. He apologized briefly.

"I possibly forgot to explain the ruins." Again, Jal-Ganyr's eyes swiveled slowly about.

"They are not ours," he said mildly. "They are yours."

THE END

NOTES ON NUCLEAR RADIATION

BY EDWIN N. KAUFMAN

To date, the best — the only — protection against nuclear radiations seems to be more nuclei, and more distance. The old technique of "Be where they ain't — and have somethin' else in the way!"

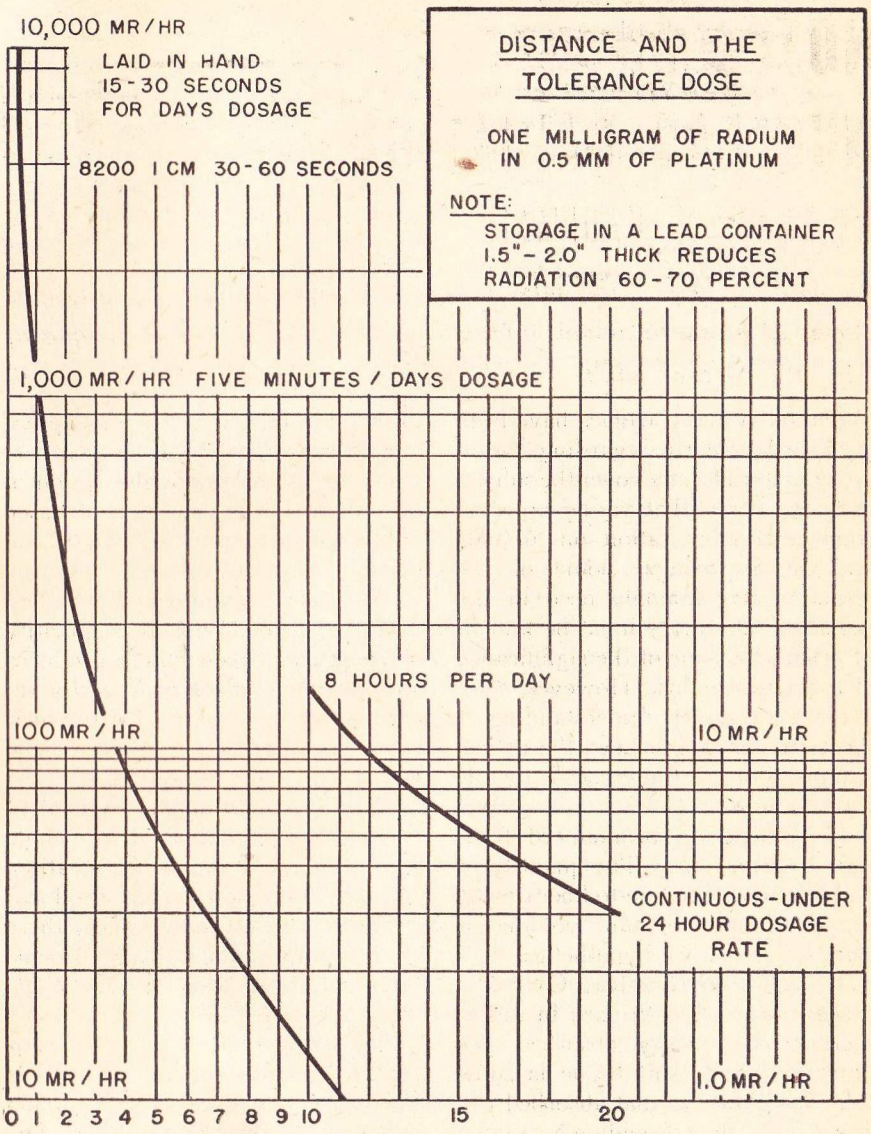
Although many articles have been published recently regarding radioactive materials none cover the subject as to the effects that can be expected from nuclear radiation on animals and human beings. Some of the terms most commonly used in the radiation laboratory must be known or otherwise some of the significance of the article is lost. However, even without a complete understanding of the terms used, I believe the article will prove of great interest to any science fiction fan.

(1) Roentgen – pronounced Ren-Kin. *The unit dose.* The quantity of X or gamma radiation to liberate one esu of charge per unit volume of standard air in a hypothetical air-wall ionization chamber. Over the range of wave length used in radiotherapy the energy absorbed per gram of human soft tissue is sufficiently accurate to that absorbed per gram of air, thus providing a suitable standard by use of an air chamber. When the material is skin or bone the energy absorption is erroneous, except for this, it is common practice to state that the Roentgen corresponds to an energy absorption of eighty-three ergs per gram of tissue or the production of 1.61×10^{12} ion pairs per gram of tissue.

(2) *Rem. R*oentgen *E*quivalent *M*an, Mouse or Mammal. A quantity of energy absorbed which produces an *equivalent effect biologically* regardless of the character of the incident radiation, i.e. alpha, beta, gamma, neutrons, et cetera.

(3) *Rep. R*oentgen *E*quivalent *P*hysical. A measurement to include neutron irradiation, beta radiation, and any radiation which produces ionization in *Tissue.* Generally there is no confusion in writing "Roentgen" instead of "Rep" when the latter is clearly implied.

The average radioactive studies or applications mainly involve materials which are alpha, beta, and gamma emitters. Generally speaking, any Health Survey Meter capable of detecting these three radiations is calibrated in Roentgens per hour and no



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danger is involved in utilizing R/HR as the basis for all tolerance dosage. A very serious point that MUST be remembered is that many portable survey instruments do not detect alpha radiation effectively or at all, and the same applies to detection of beta particles.

Alpha particles have a positive charge equal to that of two electrons. They travel *very short distances* in the air but are extremely dangerous as they can produce serious skin burns.

Beta radiation consists of high speed electrons—identical to electron flow in cathode ray tubes. The beta radiation is of higher intensity, than alpha, and therefore travel farther through the air. As the distance traveled, and the energy is higher than that of the alpha particles, it is much easier to detect. Beta radiation, like alpha, is stopped by the skin thereby producing severe skin burns upon overexposure. More of this later.

Gamma radiation at the short wave lengths produce skin burns—soft Xrays—while the higher wave lengths—hard Xrays—are equivalent to radium and produce deep internal burns.

Neutrons are usually not found, except in special cases, outside of the operation of Cyclotrons and Atomic Piles—Reactors. Detection methods and effects are not included in this article.

Radiation hazards exist in three forms. (1) External radiation. (2) Ingestion and deposit of radioactive materials in the body. (3) Radioactive gases.

An important point which well might be made at this point is entitled the "Reversibility of Effects." By this is meant the return of a tissue to its previously normal state after exposure is discontinued. This is dependent upon the regenerative properties of the tissue. The brain and kidneys and other vital organs have NO REPAIR MECHANISM. Repair is by the formation of scar tissue—which DOES NOT take over the original function. The skin, blood, et cetera are regenerative but for the effect to be reversible it must not produce injury beyond the limits for normal capacity to regenerate. Repeated radiation damage, followed by repair, will eventually exhaust the reserve for regeneration. Thus after radiation injury—like skin burns—followed by regeneration, a repetition of the injury must be avoided. Even bone marrow, which is the body's blood supplier, will eventually exhaust its recuperative powers after excessive radiation, with fatal anemia following.

Radiation sickness is the term generally used after an overexposure to radiation. The effects consist mainly of general lassitude and headaches. This effect passes usually within a few weeks. Over a period of time, continual overexposure warning signs are: loss of the normal skin ridges of the fingertips; loss of hair on the back of the fingers and the hand; cracking, brittleness, or ridging of the fingernails; a loss of nor-

mal sensitivity; and abnormal drying of the skin. Very late evidence of injury appears as skin thickening with the appearance of wartlike growths. A special serious sign of damage is ulceration, from breakage or abrasion of the skin, which fails to heal. This turns to cancer in many cases, usually proving fatal.

After an excessive dosage a time lapse of ten years or more may occur before cancer appears. Generally speaking radiation dosage of this magnitude will never occur in the small laboratory, as it requires either Xray machine operation or the handling of large quantities of radium, carelessly handled, to cause these severe results.

The hazard of mutation occurring due to exposure to radiation, by either male or female, is not well known. There is still considerable disagreement on the subject. Many of the experiments on this subject have been on mice and fruit flies; and it has been proven that there is no positive relationship between human beings and animals on many phases of tolerance dosage. Evidence seems to point out, however, that no great danger exists. Mutations without radiation generally appear at the rate of one in twenty-seven hundred. It has been calculated that an accumulated dose of 300 r in the female will increase this rate one in two hundred thirty. These mutations will not necessarily occur in the children, but in the child's children. It should be pointed out that 300 r is quite a bit of exposure and that a time factor enters into the subject, especially with men. The mutation occurring will be a "standard" mutation, or a common one generally occurring in the family.

The effect of radiation on the reproductive organs is mainly in sterility occurring, rather than a damage to the sexual mechanism. Permanent sterilization of the female requires 400 to 600 r delivered to the ovary. In man 800 to 1000 r delivered to the testes. This method of sterilization is an extremely dangerous one, generally occurring by accident only.

The radioactive gases which are occupational hazards are the manufactured radioactive gases: xenon, argon, krypton and iodine vapor. Natural radioactive gases are from radium—Radon—and mesothorium.

Xenon has two hazards as it radiates beta and gamma in the atmosphere as well as being dangerous to inhale. The other gases mentioned are mainly dangerous on inhalation—iodine vapor being absorbed by the thyroid, after inhalation, being a special problem. One danger of radium handling is that should the platinum shell it is incased in become broken the radon gas it is producing will escape. The radium may be sealed into a glass tube to prevent further escape of the radon gas. One milligram source of radium will produce sufficient dosage of radon gas to be dangerous, with prolonged breathing, in an inclosed room over a period of days. The tolerance dose

should be .01 rep per day. An intake of 0.3 rep per day over long periods of time will definitely cause cancer of the lungs, according to one authority. As usual there is disagreement over this point. Another authority can very definitely show by logical facts and figures that this can not take place. The other authority, on the other hand, has the facts and figures of the death of miners engaged in mining radioactive ores.

The ingestion of radioactive materials is an extremely dangerous occurrence. The majority of all ingested radioactive material ninety-eight percent is excreted, but the remainder is deposited in the body. In the case of radium, the deposit is in the bones. The bone marrow attempts to keep pace with the tissue and blood destruction produced by the continued alpha bombardment but if any quantity of radium is present – several MICROGRAMS – the continued bombardment leads to bone marrow exhaustion and fatal anemia.

The tolerance dosages which are in existence provide for satisfactory safety tolerances for exposure over long periods of time, such as working in laboratories or the operation of Xray machines. Should a larger dose than the tolerance dose—per day—be received a calculation should be made of the dose received divided by the daily tolerance dose and for that number of days no further exposure to radiation should occur.

The tolerance dosage levels now in usage are as tabulated below:

X and gamma radiation:

0.05 R per day (Old rate 0.1 R?DAY)

50 milliroentgen per day.

Beta radiation (external):

0.1 rep per day.

Radioactive gases (radon):

0.01 rep per day.

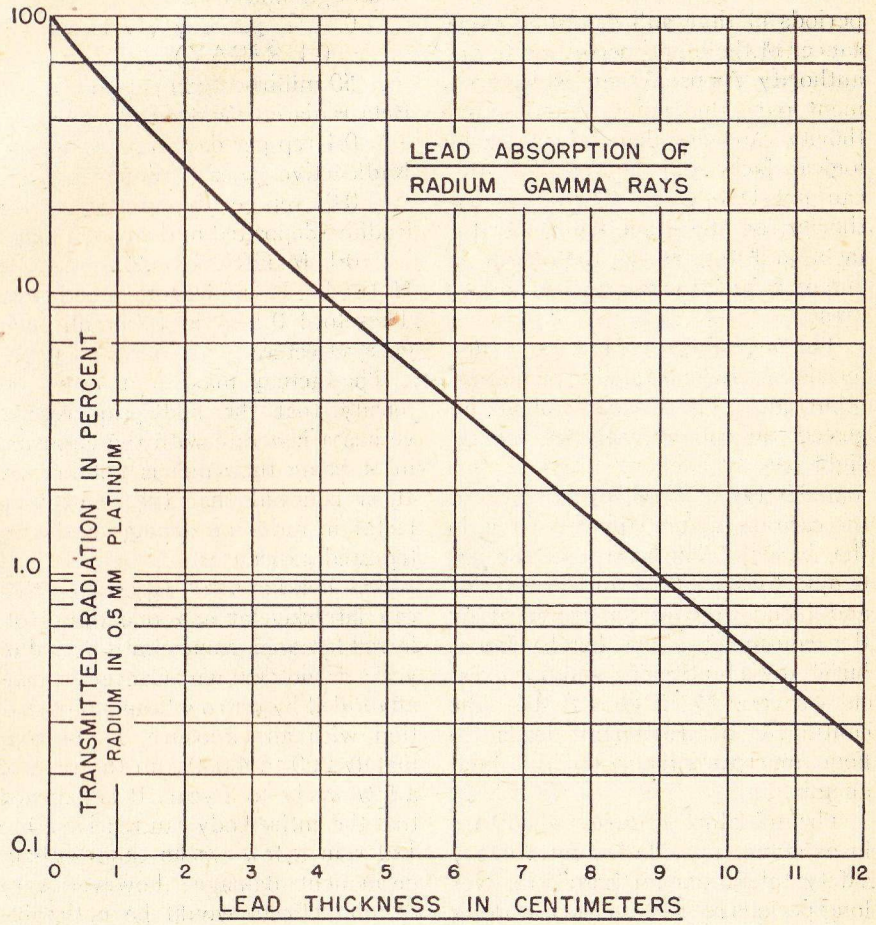
Radium deposited in the body:

0.1 MICROGRAM.

Note: 1.0 R is 1,000 milliroentgens. Therefore 0.1 R is 100 milliroentgens, et cetera.

The actual maximum rate – intensity—that the body can receive versus a low rate with the exposure in R being the same is not known. It is believed that the controlling factor in radiation damage is the integrated exposure.

The maximum roentgen dose that can be taken at any one time, followed by no exposure for a period of years is not known. Cancer is usually killed by narrow beams of radiation with an exposure of approximately 300 to 4,000 r in the time of a few weeks to a year. It is believed that the entire body can receive 80 to 120 r in a few weeks time without permanent damage; however very definite effects would be noticeable at the time. This dosage is at least a five-year quota dose. It has been estimated that 250 to 400 r would be a fatal dose to humans. An interesting point to bring forth is that fluoroscopic examinations generally require an intensity rate of 3600 R/Hr. A thirty-second exposure—as a patient—is a 30 r dose. Start adding



The protection afforded by a 1 1/2 inch lead storage container for a one milligram radium source is as follows: The radiation at 1 1/2" (3.81 cm) is 1270 mr/hour (see formula in text). A lead storage container 1 1/2" provides an eighty-nine percent radiation reduction. Neglecting the fact that the radium intensity of 8200 mr/hr is at one cm, the radiation outside the storage chamber would be approximately 140 mr/hr.

them up you patients! A erythema dose, producing a perceptible reddening of the skin, requires a dose of 100 to 1500 r depending upon the wave length and type of radiation.

Some notes on cancer and beta radiation:

The mechanism by which a normal cell changes into a cancer cell is not known. Cancer of the skin may be produced by (1) Irradiation at low intensities over a long period of time; or (2) Irradiation at high intensities for a short period of time. Irradiation of the skin by ultraviolet as well as by nuclear radiation will cause skin cancer.

In the author's opinion it might be well to investigate diathermy irradiation as a possible source of the increase in cancer over the past few years. In either of the above cases the cancer does not appear for a period of at least months and usually many years. In the case of the high intensity exposure marked tissue destruction occurs very shortly after the irradiation. The injured tissue does not heal at all or does so very slowly over a period of many months, leaving a permanent scar. The circulation of blood through this area is very poor. Should the wounds heal no cancerous growth may occur for many years. A cancer growth is usually set in motion by accidental injury of the issue previously injured. When cancer is caused by continuous low intensity radiation, tissue changes take place very gradually, and are generally not perceptible. Eventually the tissue is damaged, circulation interfered with, and when an injury to the area occurs the tissue is no longer capable of producing normal cells for repair of the damage and therefore cancer occurs.

Breast cancer is generally treated with about a 3,000 roentgen dose. This dose may be severe enough to produce, in itself, cancer of the lungs or skin but such does not seem to be the case. It, however, should be noted that the majority of all such persons generally are deceased within ten years.

Before the Atomic pile, or reactor as it is named, beta radiation was not a problem, medicinally speaking. Today it is possible to receive severe radiation burns as strong sources of beta radiation exist. Beta radiation inflames the eyelids; the eyes water and become sealed shut. Loss of hair occurs as well as ulceration of the skin. If the dose of beta rays is intense, death occurs in a short period of time. Partial recovery from some effects occur from lower dosage, but the recovery is not permanent, death following shortly. Should the dosage be insufficient to produce death, then several months later the eyes develop a pronounced permanent opacity. Irradiation of the eyes by ultraviolet or high-frequency radio waves—12 cm—will also cause opacity.

The lethal dosage required to kill fifty percent of the animals within forty-five days is as follows: mice, 4700 rep; rats, 7500 rep; guinea pigs, 7800 rep; rabbits, 20,000 rep. Calculations show a lethal dosage for

man of about 60,000 rep. The total energy absorbed to produce fifty percent killing is directly proportional to the weight of the animal. Dosage below that required for death shortens the normal life span considerably. On the basis of absorbed energy gamma rays are 1.75 more lethal than beta rays. Sublethal dosage of beta produces tumors, in many cases, in mice and rats but none in guinea pigs or rabbits. This is as good a time as any to repeat that many of the statements made in this article are subject to disagreement, some in a minor way and a few in major ways. If I don't put this clause in, I'll surely hear from a number of readers!

Now for a few practical notes:

The average small laboratory will not use any one quantity of radioactive material of over one to ten milligrams of radium or equivalent radiation hazard. A formula of great use with any one working with radium is the following: One milligram of radium, in equilibrium, in one half mm of platinum at one centimeter radiates 8.4 roentgen per hour or 8,400 milliroentgen per hour. The actual intensity varies according to the authority between 8.2 to 8.5 roentgen per hour. This quantity of radium — one milligram — is relatively safe, although exposure at one centimeter for one half minute is a day's dosage. The important thing to remember is that the DISTANCE from any source of radiation is the safest shield from radiation. With radioactive sources the intensity decreases by the square as the distance increases. CONVERSELY the intensity increases by the square as the distance decreases and in a matter of INCHES low radiation intensities can be dangerously high. This is shown on the chart entitled Tolerance Dosage Vs. Distance.

Before any radioactive material is handled by either technician or engineer he should be fully familiar with some form of Health Survey Meter or other radioactive protective device. Generally these instruments are either portable Geigers or electrometer detectors.

The GEIGER TUBE DETECTOR is the most sensitive portable radiation detector manufactured. The range of detection generally provided is 0.2 mr/hr, 2.0 mr/hr, and 20 mr/hr. Thus when the detector is reading full scale on the 20 mr/hr range an exposure time of two and one half to five hours per day is permissible. The portable Health Survey or Mining Geiger Detector *will not detect alpha particles and some Geiger portables will not detect alpha and beta.* Laboratory monitoring Geigers will in general detect some alpha, beta and gamma. Geiger tubes have limited life, sometimes as low as one hundred hours of use. The average tube will count 10^8 times before becoming erratic.

The portable ELECTROMETER DETECTOR—commonly called the Cutie Pie—consists of an ionization chamber generally made of a piece of

plastic tubing — with the interior coated with a conducting coating. A sub miniature vacuum tube designed for extremely high grid resistance values on the order of 150,000 to 1,000,000 MEGOHMS, collects the ions liberated in the ionization chamber thus providing an input d.c. voltage, biasing the tube to a different plate current. The tube actually acts as more of a high-impedance to low-impedance transformer device, as the tube has practically no gain. A meter in the plate circuit is calibrated directly in roentgens per hour. The electrometer detector although not as sensitive as the Geiger detector will detect alpha, beta, and gamma; although some detectors are manufactured for beta and gamma detection only. This detector is to be preferred for measurement or detection of X and gamma radiation and for general health surveys. The ranges generally provided are 50, 500, 2500 mr/hour. A few instruments provide a 2.5 mr/hour range.

Personnel working in laboratories where dangerous quantities of radioactive materials or radiation is present wear picture film badges or pen type ionization chambers. Portable alarm exposure meters have been constructed small enough to place in a coat pocket or clipped to a belt. When the permissible tolerance dosage is reached an alarm bell begins ringing. This type of protection is preferable to the film badge or pocket ionization chamber, because otherwise the overexposure is not prevented nor known until the end of the day.

Considerable literature on instruments, portable and otherwise, may be obtained from Technical Associates, 3730 San Fernando Road, Glendale, California and from Tracerlabs, Boston, Massachusetts. The Atomic Energy Commission is selling literature on all phases of nuclear radiation. Generally the information is of no value to anyone desiring to construct equipment, but is fascinating to any one interested in the various engineering fields. The average pamphlet sells for ten to fifty cents—no C.O.D.s. The address is: Documents Sales Division, P.O. Box 62, Oak Ridge, Tennessee.

Table of
ROENTGENS/HOUR Vs. DISTANCE

Source: One Milligram radium

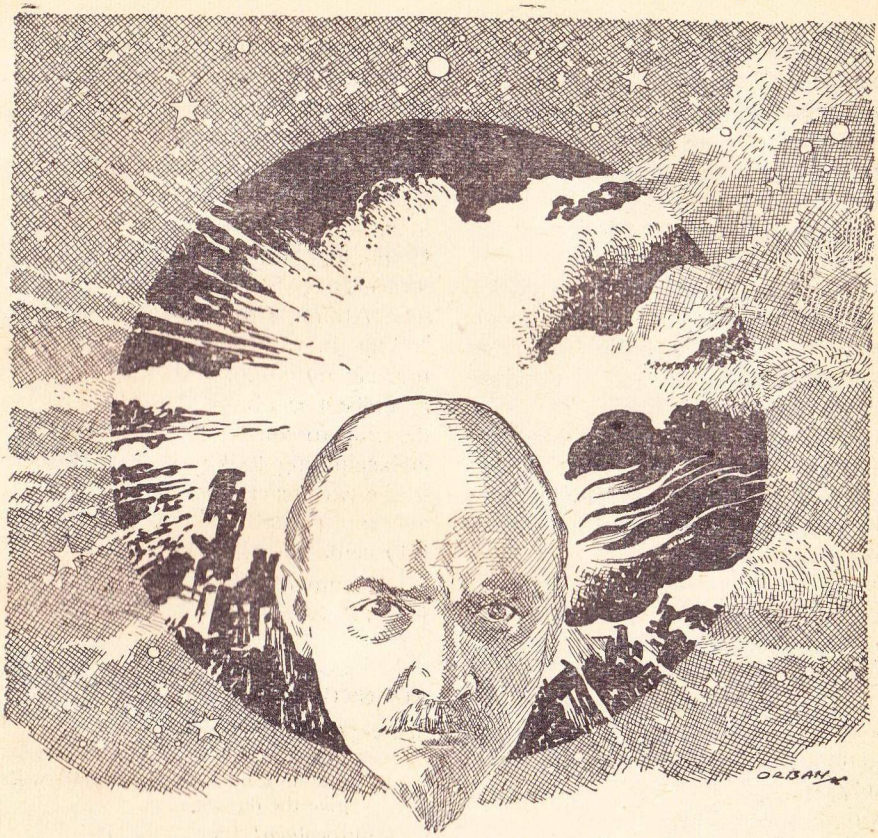
Note: For larger or smaller quantities of radium the following formula will give the dosage rate.

$$\text{Milliroentgen/Hour} = \frac{8200 \times W}{D^2}$$

W is the radium weight in mg
D is the distance in centimeters

CM	INCHES	Milliroentgens/Hour
1.0	—	8200
2.54	1.0	1270
5.08	2.0	318
7.62	3.0	142
10.16	4.0	80
12.7	5.0	51
25.4	10.	12.7
38.1	15.	5.65
50.8	20.	3.18

THE END



THE MAN FROM OUTSIDE

BY JACK WILLIAMSON

When children play with matches, it's dangerous. But when older, more experienced people put ideas in their heads, it can be even more dangerous . . .

Illustrated by Orban

The quarantine station lay hidden in a crater on the face of the moon that Earth never sees. Dummy craterlets of inflated fabric disguised the small field where the yearly supply flier landed, and all the other installations were sunk deep in a lonely peak within the dead ring-mountain.

The lieutenant saw the explosion on Earth, from the lookout center there. He stood beneath a thousand feet of lunar rock, but that savage burst of gamma radiation had triggered relays in the orbital spy cells, and they transmitted a dozen views of that fateful flash and the ominous cloud that mushroomed and faded above it.

He burst into the commander's office, breathless with the news.

"An atomic explosion, sir!" he gasped. "On Sol III—in the southwestern desert of North America."

The commander was a cold, unbending man, a competent officer but hard to know. The psionic translators rendered his name as Bowman, but its original clicking consonants were unpronounceable. Though he was only eighty, his straight black hair was already silvered at the temples and his thin dark face was deeply lined as if with age. He looked up at the younger officer with an air of absent inquiry.

"So it's you, lieutenant?" His quiet voice became mildly reproving. "Weren't you taught how to approach your commanding officer?"

The lieutenant turned first white and then pink with fury. He was too new in the service to recognize the problems of discipline at this remote outpost, thirty light-years and more from regional headquarters. He had already come to regard this silent, icy man with a secret antagonism, which exploded in him now.

"I was taught—sir." He saluted stiffly, but his incredulous resentment echoed in his voice. "Do you want me to ring and wait for your official permission to tell you that I've seen an atomic blast?"

"I do."

"A uranium fission reaction!" A bitter amazement shook him. "Don't you know what that means, sir? It means that these people have reached a very dangerous crisis in their development—or else that somebody has given them dangerous illicit information from outside."

"Leave the room." The commander's voice had lifted very slightly. "Come back properly."

The lieutenant shook his head unbelievingly, and stumbled back into the corridor. He paused a moment there, struggling to control his anger. He had honestly tried to understand the commander, but they came from different worlds. Although they could talk easily enough, with the tiny psionic translators they wore like hearing aids, Bowman's hawk-nosed, black-pigmented face seemed as forbiddingly foreign as his life was strange.

The commander lived inside himself. His mental horizons were apparently limited to the service directives for the operation of a Class F

outstation. He was obeyed and even respected, but he had no friends. While the younger officers fretted through their dull tours of duty and went eagerly back to civilization, he had stayed on here at his own request.

The lieutenant couldn't understand why, but he dismissed that private mystery with a shrug of puzzled annoyance. All that mattered now was the life or the death of the new civilization coming to birth on this planet they watched. He tried to smooth his face, and set his finger on the announcer button.

The tiny convex screen beside the door instantly showed the commander's impatient face, and his voice snapped from the speaker.

"Yes?"

"Lieutenant Woods, asking permission to report, sir," he said huskily. "With reference to the atomic explosion observed on Sol III."

"Come in, lieutenant."

He walked inside, came to attention, and saluted. The commander returned the salute with a mechanical correctness, but left him at attention. He stood painfully erect, hating the black tyrant at the desk.

"So the first fission bomb has exploded here?" The commander shrugged. "What are we to do about it?"

The lieutenant caught his breath unbelievingly.

"I was taught, sir, that the liberation of atomic energy is one of the most dangerous turning points in the history of any planet."

"But Sol III is not an important planet," the commander said coldly. "The natural resources are worthless. The people are nondescript savages, remarkable for nothing except the variety and virulence of the malignant viruses and germs they allow to ravage them."

"Any planet is important to me." Resentment quickened the lieutenant's voice. "Especially this one, because our own ancestors are supposed to have taken to space from here, fifteen thousand years ago."

"I doubt that theory." The commander straightened impatiently. "Even if the Atlantean culture did arise here, these squalid savages have left no trace of it. I see no reason for much concern over anything they do."

The lieutenant tried to quiet his angry breathing.

"I'm new here," he answered quietly, "but I had supposed it would be our duty to investigate that explosion promptly and then take the necessary steps to protect these people."

"What sort of steps?"

"In cases where dangerous clandestine technological information has been received from outside," he said carefully, "I believe the Covenants provide that it should be discredited or suppressed."

"It's true that an outsider has recently been operating on this planet." The commander's flat dry voice showed no feeling. "In fact, I have

spent several years on the planet myself, assigned to the case as an undercover agent. You'll find my reports in our files. Unfortunately, the outsider escaped."

"To reveal the secret of nuclear fission?"

"You are still at attention." The commander's lean jaws tightened in reproof. "The reaction you saw is the logical climax of some centuries of independent progress. The energy equation was published here forty years ago, by a mathematician named Einstein. I investigated him. He is a native, and he derived the equation for himself."

The lieutenant shifted his weight uncomfortably and straightened again. He knew he ought to keep silent, but he couldn't help blurting impulsively:

"Can't we do something, anyhow—sir? Even though these people did stumble on the secret by themselves, can't we help them learn to use it?"

"We can't." The commander's black face stiffened. "You ought to know that."

"Why not?" He frowned with a troubled astonishment. "Isn't Sol III our responsibility, sir? Now that these people have come to the time when atomic energy will either lift them out of barbarism or else destroy all they've accomplished—can't we help them at all?"

"We can't," the commander repeated. "I have been watching the struggles and the blunders of these people longer than you have lived. I try to remember that what they do is none of my business."

"Isn't it?"

The commander studied him thoughtfully. "Why do you think we are stationed here?"

"Fundamentally, to assist these people in their climb toward civilization."

"Fundamentally, you are wrong." The commander's voice turned brittle with impatient. "The Quarantine Service exists to enforce the Covenants of Non-Contact. The Covenants were set up to prevent the damaging collisions of cultures at incompatible levels of social evolution. Our duty here is to ward off all cultural contact with the outside. That is all. Whether these people use atomic energy to reach the stars or to commit race suicide, we can't interfere. Understand?"

"I suppose so."

Yet the lieutenant held on to a private reservation, which the commander must have seen.

"I've been watching you, Woods." The probing eyes of Bowman were cold and keen as a scalpel. "Though you came here with an excellent record, your attitude is disappointing."

Pale with resentment, the lieutenant held himself erect and silent.

"We're all uprooted people, in the service," the austere officer continued. "Each change of post carries us a dozen or a hundred years ahead in relative time, and there is no turning back. Every one of us has given up his home and his friends

and his family. Though the service offers compensations, they must be earned."

The lieutenant stood listening with a frozen impatience. He had left his own native place and time with a painful sense of loss. Vega IV had been a good planet, a hundred years ago. His father had begged him to take over the family's prosperous shipping firm. There had been a girl who begged him to stay. Against all that, there had been only his imperative desire to join the great organization that guarded civilization. He had volunteered—and he thought of that hard decision with a pang of cruel disillusion now.

"Do you want to stay in the service?"

Flinching from the harshness of that question, he said he did.

"Then you had better watch yourself." The dark eyes searched him dispassionately. "Have you ever known a man broken from the service?"

"I don't think so."

"I have," the commander said. "They are pathetic figures. We still have our demanding duty and our own small world of men and women dedicated to it. If you lose those, you've nothing left. The service will pay your way back to the place where you joined, but you are still lost in time. There are no fliers to the past."

"I understand," the lieutenant answered.

Yet he had not entered the service for his own benefit, and he left the commander's office still determined to investigate the atomic explosion he had seen. He was assigned to routine clerical work, but he began to spend his spare time searching the files of the case the commander had mentioned.

Thirty years ago, those records showed, a patrol flier commanded by Bowman had found a shipment of cultured viruses cached on Pluto. The malignant microorganisms had been gathered on Earth, obviously for military use on some planet whose people were not immune to them.

Such a bold violation of the Covenants demanded vigorous action. The web of spy cells was widened. Another patrol flier was sent out to intercept any outlaw craft approaching the cache on Pluto. Bowman, then a lieutenant, volunteered for the dangerous undercover mission to trap the outsider still presumably operating on Earth.

That effort had run through twenty years, but no unidentified craft had ever disturbed the spy cells. The trap on Pluto had not been sprung. Bowman and the other agents sent to Earth had brought back voluminous reports but no outsider.

The lieutenant neglected his meals and his sleep for nearly two years, exploring those reports. He finally found the clues he wanted, and took them at once to the commander's office.

"Lieutenant Woods, asking permission to report, sir." This time he

was carefully correct. "I have found promising leads in the outsider case that don't seem to have been followed up. I request permission to carry my own investigation to Earth, as an undercover agent."

"That matter was dropped ten years ago." The commander scowled at him with an annoyed impatience. "Where did you find these new clues?"

"In the files, sir."

The black man's annoyance changed to a guarded watchfulness. "Where in the files?"

"In your own reports, among others." The lieutenant's knees and voice were trembling, but he went on stubbornly. "Chiefly in those from the Soviet tribe." He caught his breath. "I believe an outsider has been advising the tribal council called the Politburo, probably as a member of it."

"Impossible!" The commander seemed almost angry. "Where is any evidence of that?"

"It appears first in the recorded psionic translations of the unpublished writings of the native revolutionist named Lenin."

The commander's dark face thinned and hardened. "Do you think Lenin was an outsider?"

"I think he was taught by one."

"But he wasn't even a scientist."

"Not a physicist," the lieutenant said. "He didn't invent the fission bomb. But he did introduce methods of violent revolution unknown on Earth before. In some of his private writings about the science of revolution, I found direct quotations from the interstellar histories I studied at the service academy."

"History repeats itself." The black man shrugged impatiently. "A million decaying empires have been toppled by a million revolutionists. Is it very remarkable that a few of them happened to develop similar methods?"

"But there are other clues," the lieutenant insisted. "Such as the devious shifts of tribal economic and military policy. One by one, they mean nothing. Taken all together, they do show outside influence."

"I doubt it." The commander's voice had lifted harshly. "That outsider must have stopped here to arm himself with an illegal biological weapon, but I can't believe he stayed long. The planet is too backward and filthy to be a very desirable hide-out."

"An accident, perhaps," the lieutenant suggested. "He must have intended to rejoin his confederates on Pluto, but I suppose our search scared them off. He was left marooned, and he had to make the best of it."

The commander shook his head, unconvinced.

"Anyhow," the lieutenant persisted, "I believe these leads are worth investigating. May I have the assignment, sir?"

The commander was evasive. He wanted time to review the files himself. He challenged minor points. He proposed to send a more experienced agent. He even hinted at last

that he could consider recommending the lieutenant for promotion and transfer to a more desirable station.

Outraged, the lieutenant refused to be bribed. Each new delay heightened his suspicion that Bowman had stayed on here to keep something covered up. He was careful to make no reckless charges, but he renewed his pleas until finally the black man yielded.

"All right, Woods," the commander said. "I'll send you down to Sol III." Bleakly, he added, "If you expect to stay in the service, you had better bring back your elusive outsider."

Two years later, the lieutenant stood again at attention in Bowman's plain, gray-walled office. He had spent that interval on Earth. A neutrionic flier had landed him by night on the frozen tundra of northern Asia, clothed and equipped for his mission. He had carried a portable psionic telephone with which to call the station when he was ready to be picked up, but he had never called. Two more agents had been landed at last, to track him down and bring him back.

"Well, lieutenant?" Bowman looked him up and down with black, sardonic eyes. "Did you find the outsider?"

"I'm not certain."

The lieutenant was thinner and visibly older. His eyes were red-rimmed with strain and restless with a puzzled unease. He held himself erect, but his flushed skin and his hurried breathing showed his agitation.

"But I did find something else," he added quickly. "Something more important now. A danger to the birth of freedom on this planet."

"Due to outside influence?"

"Indirectly, yes."

"What is it?"

"An accidental atomic explosion, about to happen."

"We've observed quite a number of fission explosions during the past four years," the commander said. "None of them has been unduly disastrous—or set off by outsiders, either."

"But this one is different," the lieutenant insisted. "I'm afraid it will extinguish this young civilization—unless you let me go back and prevent it."

"You have been on Sol III too long already." Disapproval hardened the commander's dark face. "You had better give me an excellent excuse for your long absence, unless you want to be charged with desertion."

"But I didn't desert!" The lieutenant wet his lips nervously. "I simply found such a desperate situation that I couldn't leave, even to report." His voice shook urgently. "You must let me go back, sir—in time to stop that tragic accident!"

"I'm afraid you've forgotten the Covenants." The commander scowled at him severely. "But let's hear about this coming explosion."

"I landed in Soviet territory," he began. "I was expecting to find the

outsider hiding among the rulers of that tribe, but I failed."

He saw the commander's satisfaction, and lifted his head defiantly.

"I did penetrate the walled group of council huts called the Kremlin," he went on quickly. "I found enough evidence of outside influence—even in the methods the present chief, Stalin, is using to crush the last spark of freedom from his own tribe.

"The guilty outsider was already gone, but I soon found clues to make me think he had left the Politburo to lead a resistance group. This small group is the only active opposition left. It operates deep inside the continent, where the police aren't quite so alert as at the frontiers. It is organized around a few nuclear physicists, who are working furiously to build a hydrogen bomb—I thought one of them would surely be my man."

"But he wasn't." The commander's lips tightened oddly. "How did you find this underground group?"

"The first clues were the secret police reports of shortages at the plants where Stalin is trying to make fusion bombs—with processes his spies have stolen—for a surprise attack on the American tribe. With our methods, I was able to find the missing items and the men using them—but not the outsider.

"All the plotters are natives—most of them Communist party members, Red Army officers, and factory managers. They are furnishing the supplies. The physicists have set up a number of scattered, hidden laboratories. They are gathered now in a cave in the mountains of central Asia, ready to assemble their first hydrogen bomb.

"They plan to destroy the Kremlin with it. They hope to kill Stalin, the entire membership of the Politburo, and other key leaders. After the explosion, they intend to lead a general rebellion."

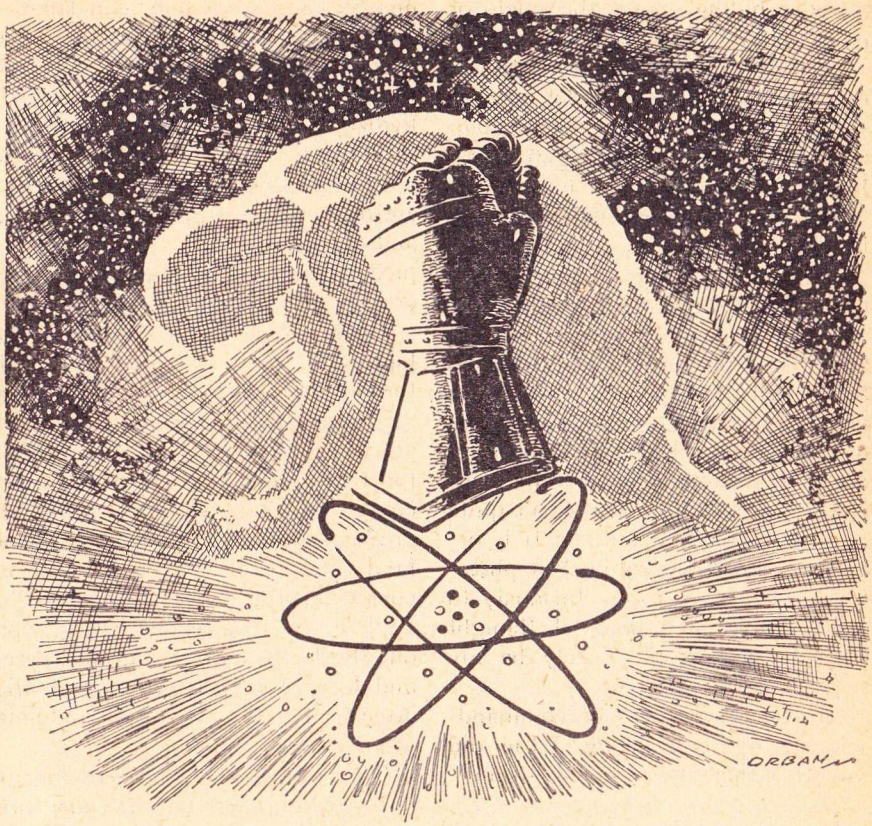
Frowning, the commander shook his head. "I see no reason to regret the destruction of the Kremlin."

"It is in no danger," the lieutenant said grimly. "I was able to enter that cave and examine the incomplete fusion bomb. Its builders are natives, and they have made a fatal error. Unless their mistake is corrected, the bomb is certain to explode prematurely. It will wipe out the leadership of the resistance, and leave Stalin free to smash the American tribe with his own atomic attack."

"Perhaps." The commander shrugged impatiently. "But what can we do about it?"

"We can supply just one bit of essential information." The lieutenant's voice lifted resolutely. "I was preparing to do that — establishing myself as another nuclear physicist, a refugee of the German tribe—when your men arrested me."

"Then they were just in time." The commander nodded grimly. "These people invented their own atomic bombs, and we've no right to interfere. As for you, I'm afraid the charges against you must include at-



tempted contravention of the Covenants."

"But we must interfere," the lieutenant insisted huskily. "Even though the atomic bomb may be a native product, the Soviet methods for its use are partly borrowed from outside. Isn't that excuse enough?"

"It isn't. One crime does not excuse another."

"But I'm afraid the American tribe can't survive an atomic attack conducted by outside methods."

"Whatever happens, we can't meddle again." The commander's black head thrust forward bleakly. "These people must stand or fall by their own efforts alone."

"They'll fall!" Forgetting that he was at attention, the lieutenant stepped anxiously forward. "Unless—"

"Attention!" The commander peered at him sternly. "You are relieved of all duty at Sol Station, effective now. You will remain in your

quarters, under arrest, until the next supply ship calls. You will return aboard it to Denebola Base, to receive whatever discipline your dangerous misconduct requires."

Trembling, he gulped and shook his head protestingly.

"In view of your youth and your intentions," the commander continued, "I am going to recommend clemency. I hope your punishment will not be unduly severe. In any case, these people will have time to solve their atomic problems without your interference. Thirty-two years of relative time will pass before you dock. In that time, these people will either learn to live with atomic energy or else die by it."

"But, sir—" he muttered hoarsely. "Please—"

"That is all," the black man rapped. "Report to your quarters."

He half turned and swung back again. His fists had clenched unconsciously. He wet his pale lips and caught his breath to speak.

"Silence!" the commander shouted. "Any further insubordination will prejudice my recommendation for clemency. You had better go quietly."

He stood peering at the gaunt man, as if he hadn't heard. His thin hands opened and shook and knotted again. Sweat broke out on his face. For a moment he was about to obey, but abrupt defiance checked him.

"I'm not going yet," he whispered breathlessly, "because we've something else to talk about." He saw the black hand sliding toward a button on the desk. "Don't call anybody—unless you want the whole service to know you are the outsider!"

"I? The outsider?" The commander's voice rose angrily. "You can't frame me."

Yet his face had turned a sickly gray, and his thin hand drew back shaking before he had touched the button.

"I don't need to frame you." The lieutenant stood watching his symptoms of collapse with an uneasy elation. "I've facts to show that you began meddling illegally with the internal affairs of this planet nearly fifty years ago."

"What facts?" he gasped faintly.

"The fact that no arrest was ever made." The lieutenant stepped warily toward him. "Although that search would certainly have caught any outsider, except one of us.

"The fact that you were commanding the two-man patrol flier that discovered the cache of malignant viruses on Pluto—where you yourself had left them.

"The fact that you had already done undercover work on Sol III at that time—and no doubt collected the viruses there.

"The fact that you volunteered very promptly for numerous undercover missions to Sol III—you must have been the outside member of the Politburo, at the very time you were pretending to hunt yourself!

"The fact that you have stayed on

at Sol Station long after you might have had some more desirable post—so that you could carry on your criminal aid to the Soviet tribe, in direct violation of the Covenants."

The lieutenant paused to get his breath, grinning without mirth.

"Are those facts enough?" he rasped. "If they aren't, I've others—enough to round out the picture. But I'm willing to forget them all, even now, if you will ask for a transfer to another station—and let me prevent that explosion."

"I . . . I can't—"

The words were choked and hopeless. The commander had slumped miserably at his desk, looking suddenly feeble and tired and very old. He rubbed at his eyes in a bewildered way, and then sat fumbling nervously with the psionic telephone and the other little objects before him.

"Make up your mind." The lieutenant's voice lifted sharply. "Unless you let me go back, I'll report those facts. I believe you already know what it means, to be broken from the service and lost in time. Is that what you want?"

The black man twisted in his chair, almost as if in physical pain.

"My mind is made up." Desperation shuddered in his voice. "And you aren't going back."

His shaking hand fell to the butt of his neutrionic pistol.

The lieutenant started forward and checked himself helplessly. Disarmed since his arrest, he stood empty-handed against that silent gun. His mind could already feel the freezing flash of it, which killed by transforming heat into impalpable neutrinos. This twisted monster, who had guided the blood-stained rulers of the Kremlin for thirty years, wouldn't hesitate at one more murder.

"I'm still your superior," the commander was rasping hoarsely. "I won't tolerate—"

An orange light halted him, exploding in the crystal dome of the psionic telephone. A tiny voice called from the instrument, urgently:

"Lookout to commander!"

"Go ahead, Lookout."

The orange signal faded, and the image of the Lookout's head appeared in the dome, doll-sized but visibly excited.

"A hydrogen fusion explosion, commander!" his small voice cried. "It was apparently set off by a plutonium fission detonator, but the reaction was a thousand times more violent than the fission explosions we observed on Bikini."

"Where—" the lieutenant whispered huskily.

The commander echoed, "Where did it happen?"

"In Central Asia, sir. Evidently the American atomic monopoly is broken. I think these savages are going to be showing us some action!"

The commander nodded heavily, and the crystal dome went clear again.

"So this is what you've done?" In his savage anger, the lieutenant for-

got the neutrionic pistol. "You wouldn't let me reveal just one fact to aid these people—but you have spent fifty years systematically corrupting and destroying them."

The commander merely shook his head, as if overwhelmed with weariness and pain. His restless hand had risen from the gun.

"That was the blast I wanted to stop," the lieutenant continued bitterly. "Now it has wiped out the last island of freedom in Soviet territory. In time, it will sweep human liberty from the planet."

He paused to shake his head, with a puzzled scorn.

"What I can't understand is why you did it," he whispered harshly. "You have sacrificed your own career to stay on at this dull little post —for what?"

The commander straightened, breathing heavily. His sick eyes looked up for an instant, and fell back to the desk. Aimlessly, his nervous hands fumbled with the telephone. His grayish face twitched. He looked anguished and dangerous.

A new panic swept the lieutenant. He had seen the risk in his hasty accusations, but the pressure of that struggle for a planet had left him no time for caution. He was defenseless now. Watching the tortured man slowly draw the gun, he waited silently to die—and gasped with surprise when he saw the weapon pushed out toward him across the desk.

"Take it," the commander's dry voice rasped. "If you want to kill me, go ahead. It's true I've broken the Covenants. My meddling has done ghastly damage, and I'm ready enough to pay for it. For your own sake, however, I think you had better let me explain the miscalculations that made me an unwilling partner of Stalin. Perhaps I can save you the same error."

The lieutenant moved to pick up the gun but thought better of it. He straightened uneasily, frowning at the haggard man.

"Explain," he said, "if you can."

"My blunder was the same one you have been trying to make." The commander nodded with a weary regret. "I failed to understand the wisdom of the Covenants. I didn't know that people can't be helped."

"I know they can't," the lieutenant whispered harshly. "Not by Stalinism!"

"Listen to me—please!"

The commander's wounded voice was so moving that he nodded silently.

"This was my first station," the broken man began. "I came here at about your age, brimming with your own blind eagerness to help these unfortunate people climb the difficult path to civilization.

"My tragic blundering began when an archaeologist arrived here on the supply ship from Denebola with permission from headquarters to make an undercover expedition to Sol III to look for the ruins of Atlantis. He expected to find them in Central Asia.

"He had to be accompanied by an officer trained in undercover work, and I volunteered to go with him—I was already interested in these people. When our preparations were complete, we were landed one night on the steppe near the large village of Kazan.

"We established identities as explorers from the American tribe, and spent several months at the village university, looking in vain for historical records of the Atlantean culture, before we went east to the site we were to excavate.

"Altogether, we were on Sol III nearly a year. We didn't find Atlantis. If our interstellar civilization sprang from Sol III at all, I know it wasn't born in the miserable mud huts we uncovered.

"The living natives we met were still wretched enough. Most of them had recently been owned, like the land, by a decaying aristocracy, and they were oppressed by the corrupt bureaucracy that surrounded the Czar—the autocratic hereditary chief of the tribe.

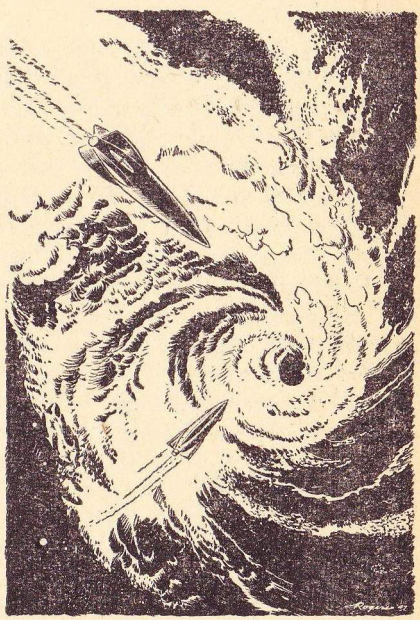
"I was as deeply disturbed as you would have been by the contrasts of squalid poverty and unearned wealth, and as painfully shocked by the cruel injustice we saw everywhere. I wanted to do something about it, and unfortunately I did.

"It happened while we were traveling across the Yenisei Valley on our way back to Kazan. Difficulties with the primitive transportation system delayed us in a frontier hamlet there, and I met a native who had the same desire to remedy those wrongs.

"I spent a whole night talking to him, at the filthy little inn. He was extraordinary enough, even then—a short vigorous man, with a powerful head. His commonplace features were brightened by piercing eyes. You seldom find a native—or an outsider, for that matter—with his energy and intelligence.

"He was then less than thirty, but he had already dedicated his life to the liberation of the working class. He had been arrested and imprisoned for a year before his exile to that remote province, and his beloved older brother had been killed for activities against the Czar.

"That night—never really think-



ing what I was doing—I violated the Covenants. I was fascinated by the ability and earnestness of that young rebel, and moved by the drama of his unequal struggle for the freedom of his people.

"I failed to see the danger in him. He was full of a naive philosophy he called dialectic materialism, which forecast the fall of his oppressors and the rise of a classless society. Utter nonsense. That same battle for freedom has been repeated many million times, on several million planets, and it has never yet ended with the automatic withering away of classes and the state. Even with my own smattering of interstellar history, I could see the flaws in his philosophy and the fatal weakness in any plan of action based upon it.

"And I forgot myself. Not so far as to let that native rebel guess that I was an outsider, but I did tell him a few of the simplest general principles of war and revolution that I had learned at school. He seized upon the ideas with an eagerness that disturbed me a little, even then.

"He thanked me, when we left the inn at dawn, for a very stimulating conversation. The archaeologist and I went on to meet the flier, and he stayed to overwhelm his enemies with the weapons I had given him so carelessly—ideas more deadly than neutrionic bombs."

The lieutenant whispered suddenly, "Was his name—"

"Lenin." The commander nodded bleakly. "He is dead long ago, but those ideas are still alive. They are sweeping the planet like a conflagration."

"My friends in the cave were trying to put out that blaze with their hydrogen bomb," the lieutenant said bitterly. "They could have succeeded, if you let me alone long enough to give them that one hint."

"I don't think so." The gaunt black man shrugged heavily. "I tried for many years to undo what I had done, and only made things worse."

The lieutenant looked at him searchingly.

"So that was your business at the Kremlin?"

"I arranged to go back, by planting that cache of viruses on Pluto." The commander nodded unhappily. "I borrowed the identities of men in the Kremlin to advocate moderation within the tribe and reconciliation with the peoples still free. But Stalin, the cynical chief who followed Lenin, merely used those peaceful policies to screen his ruthless schemes for enslaving the whole planet."

The haggard man sank wearily back in his chair.

"The lesson was hard," he whispered, "but I learned it at last. Freedom cannot be bestowed; it must be earned. Even the best-meant efforts to grant it as a gift are commonly blighting."

The lieutenant stood silent for a time, grappling with that idea.

"But suppose I had helped perfect that hydrogen bomb," he protested at last. "Wouldn't it have

crushed Stalin?"

"Only to set up some more monstrous enemy of freedom in his place," the commander answered, "because your friends in the cave had already been contaminated with those ideas I gave Lenin. The absolute power of that weapon would have stricken then with absolute corruption. You can find a thousand examples of the process in interstellar history."

"I'm not an historian." The lieutenant caught himself staring at the gun on the desk, and looked up uncomfortably. "The plight of Sol III is already desperate," he muttered. "I don't see how anything could make it worse."

"The outlook isn't that black." The tired man smiled faintly. "Not if the Covenants are faithfully enforced. In spite of all the harm I did that night, these people still have a reasonable chance to create a free civilization."

"I don't see how."

"I think I do." The commander nodded soberly. "I've been reading a good bit of history, since I began to see the wisdom of the Covenants, and I'm willing to risk a forecast for the future of Sol III."

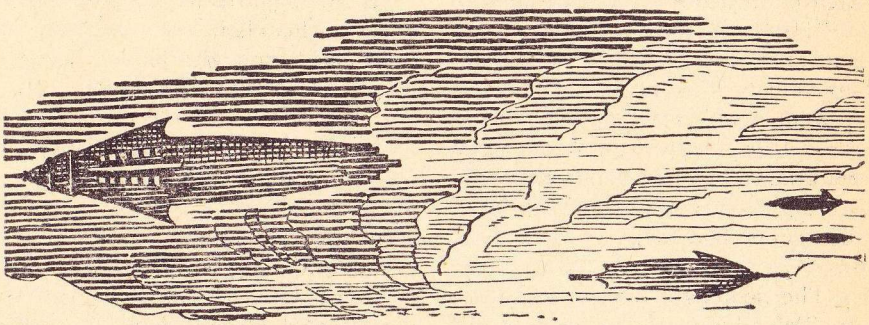
The lieutenant waited hopefully.

"The free tribes of America have not yet been seriously corrupted by what I told Lenin that night," the commander said. "They are equipped to detect this last explosion, and it should make them look to their own defenses. If they are stimulated to perfect a hydrogen bomb, it will be something of their own, which they can use without self-destruction."

The lieutenant stood watching the gun.

"I understand," he whispered at last. He picked up the gun and returned it to the commander. "And I . . . I'm guilty, sir."

"And you will make the same atonement I have made," the stern man told him. "You will renounce civilization and your own career. You will stay on here to watch against the sort of men we used to be and to see that the Covenants are enforced."



THE END

BOOK REVIEWS

BY P. SCHUYLER MILLER

"Lancelot Biggs: Spaceman," by Nelson Bond. Doubleday & Company, Garden City. 1950. 224 pp. $2.50

Nelson Bond lacks few of the tricks of the born storyteller and uses them all blandly and shamelessly in this collection of eleven adventures of his bumbling, gangling hero, Third Mate Lancelot Biggs and his long-suffering fellow officers of the rattletrap space freighter *Saturn*. "I have a theory," was Lancelot's original byword—later amended to "First find the theory"—if he always seems to fall on his feet, it is probably because they are so big and his head so light. Here, gathered from hither and yon in a gumbo of good fun, are such "remarkable exploits" —to quote the title page—as Biggs' destruction of a cargo of vegetables, Biggs as a space-cook for a pirate, the Biggs uranium plate applied to football, Biggs and the vacuole, the velocity intensifier — like Sherlock Holmes Biggs is annihilated halfway through the book—antigravity, the honeyed asteroid, the seed shipment —but go on for yourselves, and have fun.

———

"The Man Who Sold The Moon," by Robert A. Heinlein. Shasta Publishers, Chicago. 1950. 288 pp. $3.00

By this time it is no secret that one of the major *tours de force* of contemporary science fiction is Robert A. Heinlein's "future history," the interrelated series of stories which are tracing the flux of human culture through the Galaxy according to a consistent pseudohistory of Mankind during the next six or seven centuries. In "The Man Who Sold The Moon" Shasta has given us the first of five books in which this incomparable series will appear

essentially complete and in chronological sequence. But it is giving us a good deal more, for the core of this first book is the completely new title story, which ranks with the very best that Heinlein has written—a thirty thousand word "short novel" which is the fascinating story of Delos Harriman and his lifelong, doggedly ruthless drive to reach the Moon.

In a book which opens with "Life-Line," continues with "Let There Be Light"—a lighter-weight yarn of the invention of the Douglas-Martin sun-power screens which originally appeared in another magazine—and includes such landmarks as "The Roads Must Roll" and "Blowups Happen," it is saying a good deal to confess that this is utterly and irrevocably Harriman's book. Fine as "Destination Moon" is, what a tremendous human document Hollywood might have created if the same meticulous technical care had been used on Harriman's ironic story! The characterization, the force of personality, the immense human drive which the present film lacks are all there, with the not-quite-tragic ending in "Requiem," which closes the book. What a part it would have been for Walter Huston!

As John Campbell points out in his introduction, Heinlein is a master of concealed technology. We have no other writer who has worked out the scientific minutiae of his settings so fully or so unobtrusively. Yet "The Man Who Sold The Moon"—the story of a nonscientist—makes clear the equally deft care with which the human engineering details of each situation have been thought through. For it was Delos Harriman's skill in human engineering which got the first rocket to the Moon, which founded Luna City, and which at last gave him a grave there. And it is the lesson and theme of the entire Future History, charted out in the end papers of the book, that it is the success or failure of human engineering which will determine the rise and fall of our culture and our race on Earth, on the other planets, and in all Space and Time to come.

———

"Shadow On The Hearth," by Judith Merril. Doubleday, New York. 1950. 277 pp. $3.00

Judith Merril's warm, human novel of the days following the atomic bombing of New York is in the class of books like "Nineteen Eighty-Four" and "Earth Abides" which will do science fiction a great deal of good. Its characters are few: a young Westchester housewife, her two daughters, a maid, an on-the-make neighbor in a civilian defense post, a young doctor, a teacher whose warnings of attack have made him suspect as an enemy agent. The "shadow" of the title is the knowledge that one of the two children is almost certainly the victim of radiation sickness.

With every opportunity to indulge in the gaudiest kind of melodrama, Miss Merril has instead drawn her suspense from conflicts of character and personality. This is the kind of life you may be living long before 1984, if you are lucky enough to live just beyond the circle of utter destruction.

"The Best Science Fiction Stories: 1950," edited by Everett F. Bleiler & T. E. Dikty. Frederick Fell Inc., New York. 1950. 347 pp. $2.95

These annual anthologies have been the best of Fell's growing list of science-fiction books, thanks to the literary taste and broad knowledge of the field shown by its editors. The current volume, with an introduction by Vincent Starrett, contains thirteen stories from eight magazines—a greater coverage than the 1949 anthology showed. Few ASTOUNDING Science Fiction readers will quarrel with the choices from this magazine: Wilmar Shiras' "Opening Doors"—"In Hiding" was the pinnacle of the first selection—Henry Kuttner's "Private Eye," and Clifford Simak's "Eternity Lost." Few will object too bitterly to the awarding of two places to the reliable Murray Leinster and the remarkable Ray Bradbury, and few will want to miss Ted Sturgeon's impish "The Hurkle Is A Happy Beast." Of course everyone will have other candidates which he prefers to the editors' choices: science fiction would be in an unhealthy condition if selection was obvious. But Bleiler and Dikty are well on their way to doing for this field what the O'Brien and O'Henry anthologies have done for short fiction in general.

"Beyond Time & Space," selected by August Derleth. Pellegrini & Cudahy, New York. 1950. 643 pp. $4.50

This scholar's anthology, subtitled "a compendium of science fiction through the ages," ranges from Plato's launching of the Atlantis myth in the Fourth Century B.C. down to Van Vogt, Padgett, Leiber, Sturgeon, Heinlein, and Bradbury as representatives of the forefront of present-day writing. The first one hundred forty-seven pages cover the antiquities: Plato, Lucian, Sir Thomas More, Rabelais, Campanella's "City Of The Sun," Bacon's "New Atlantis," Godwin's "Man In The Moon," Holberg's "Tree Men Of Potu," and the first English translation of the great astronomer Kepler's "Somnium." The modern trend opens with Poe and includes most of the giants, with excerpts from Hodgson's "House On The Borderland" and Stapledon's "Last And First Men" in lieu of short stories. Only the out-and-out space opera is miss-

ing to make this fat but rather expensive collection truly representative of most of the growing pains of our strangely young-old genre. A good companion volume to Bailey's study, "Pilgrims Through Space And Time."

———

"Gather, Darkness!" by Fritz Leiber. Pellegrini & Cudahy, New York. 1950. 240 pp. $2.75

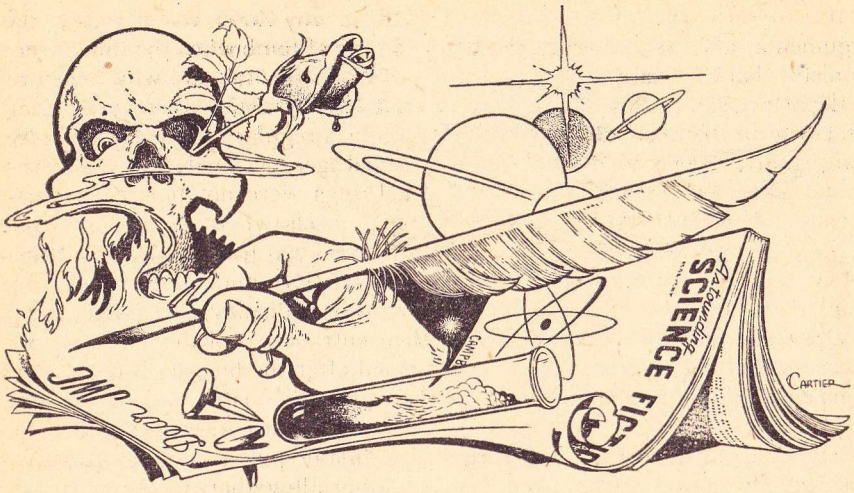
By coincidence this memorable novel by Fritz Leiber, taken from Astounding SCIENCE FICTION of 1943, appears shortly after publication of the book version of Robert Heinlein's "Sixth Column." In a sense it represents the projection of that book a little more than three hundred years farther into the future —to a time when the religion of miracles built up by the scientists of Heinlein's story has expanded into a self-perpetuating Hierarchy, now facing overthrow by the forces of its own corruption. The priesthood of the Great God has created a synthetic witchcraft as a necessary but fictitious opposition—and that witchcraft is no longer fictitious and by no means synthetic, but a rallying-ground for equally clever rebels against the iron-clad Order. Readers of this magazine will remember the idealist Jarles, the archpriest Goniface, the Black Man, the witch Sharlson Naurya, the hag mother of Jujy—but above all the author's chilling invention of the little Familiars, Puss, Dickon, and the rest. One of the best of the recent pickups from the magazines.

———

"Minions Of The Moon," by William Gray Beyer. Gnome Press, New York. 1950. 190 pp. $2.50.

The "Minion" yarns which graced the declining years of the Munsey *Argosy* would have been just another series of "Twentieth-Century-man-sleeps-six-thousand-years" fantastic adventures but for one thing—Omega. This puckish, hammish disembodied super-intelligence, last survivor of a lunar race of whatsits, intrudes himself on Page 16 and is never very far offstage from that moment on. He may be a drifting voice, a perambulating skeleton, a friendly bear, and he was probably the Cheshire cat in "Alice in Wonderland." As for plot, Mark Nevin is the guinea pig for a new anaesthetic, sleeps six thousand years, and wakes up a blue-blooded immortal in a world of assorted savagery and traces of civilization. Under Omega's needling he acquires a spouse, sets himself up as chief of a Viking band, and wipes out two nasty Russian super-brains who were giving Omega unwanted competition in the master-minding field. You must meet Omega!

P. Schuyler Miller



BRASS TACKS

Dear Mr. Campbell:

This is by way of being a belated "rave" and thank you note for the two de Camp articles, "The Mayan Elephants," and "Why Do They Do It?" Together these pieces should mark some sort of goal line in the history of the science of history, and have attracted attention from non-science-fiction readers who are historians and archaeologists.

A gem in itself is the coining of the term "credophile" for a type of person. As for Gladwin and his "Men Out Of Asia," I was glad to see it get so considered and yet so penetrating a panning. Gladwin argues convincingly that such things as pottery, textiles, et cetera, are difficult to invent more than once, so convincingly indeed that the logical reader would conclude that they never were invented by anybody in the first place.

This is meant to fit into your letter column, so I cannot enter the lists at length on the "Diffusionist" issue. For instance, China owes a great deal more to the west in prehistoric times than de Camp thinks it did, apparently because he is not acquainted with the latest research in that field. I wish mainly to reply to the rather juvenile criticisms aimed at de Camp by F. Sutherland Macklem.

It is typical of the "credophile" arguments—and of the ultra-Diffusionists—that they take as their point of departure some alleged "fact" that ain't true in the first place. Such instances are the "paved roads" of Easter Island – completely non-existent—"Phoenician writings" in the U.S.A. – Indian scratchings – and above all the "twenty-ton granite plug" that "sealed off" the "So-called King's Chamber." (It is so-called because we speak English and inscriptions engraved by the builders therein plainly say that the chamber and the sarcophagus were meant for King Cheops. Has our critic studied semantics or symbolic logic?) At any rate, I made quite a fool of myself once by asking to see this and other alleged objects I had read about, and was wearily told by the guides that it would take several Great Pyramids to contain all the marvels that cranks have dreamed up for it. Many readers must have noticed that Mr. Macklem says in two consecutive sentences that the Pyramid has no entrance passage, and that it has!

His other "facts" are of no sounder substance. Certainly Zoser built two tombs. Egypt originally was formed by the union of a northern and a southern state, and this led to a sort of "binary" government. There were two crowns, two capital cities, two treasuries, and two men for every office. In early times this was taken so seriously that the kings always built two tombs, being actually buried in one and having an "imaginary" or symbolic burial in the other. That is why Zoser was buried in the old type of tomb when pyramids were still experimental, and why Seneferu built two pyramids after pyramiding became a regular industry. As for the alleged lack of "evidence" that various kings were not buried in pyramids or elsewhere – certainly even Mr. Macklem has heard of the tomb robbers. Pyramids were originally meant for display, not safety, and their entrances probably were left unsealed after the burials. But the robbers—usually later kings—showed that elaborate curses were no help, and finally put an end to pyramid building altogether, to the great relief of the taxpayers. There is no pyramid and no tomb without burials or the record of burials—though not always by the original builder—the trouble being that they were used and re-used to the vast confusion of modern Egyptologists. Does anyone think that all Egyptologists since 1798 have united in a plot to swindle the whole world?

Indeed this is an excellent example of the dangers of knowing just a little but not much—like: "how can a rocket work out in space where there isn't any air for it to push against?"

Here's one for the Diffusionists to chew on: How come every domesticated animal and plant in the Indian New World—with one dubious exception—was entirely different from every plant and animal of the Old World? Yet within a few years after Columbus' voyages, the Indians were glad to cultivate oranges and wheat,

while corn, tobacco and potatoes were introduced to Europe.

For me, while there is a de Camp there will always be an *Astounding!* —M. Kenneth Gray, Minneapolis, Minnesota.

Of course, previous to 1900, men couldn't "invent" animals or plants!

———

Dear John:

Mr. Vincent's optimism—ASF, November 1950—about feeding an indefinitely large world population is like the fatuous attack which appeared a couple of years ago in *Time* on the works of the conservationists Vogt and Osborn, and seems to be based on the same fallacies and supernaturalistic animus.

The big fallacy lies in saying if "we" would only exploit the world's resources efficiently everything would be ducky. But who are "we"? The peasantry of overpopulated Italy, India, and China, to take the egregious examples? Who is to teach the swarming and rabbit-breeding masses of superstitious illiterates in these populations the latest agronomic practices, or to furnish them with tractors and chemical fertilizers? Improvements in methodology or in capital equipment have to come from the economic surplus produced in these countries, and in a land where population is limited on the purely Malthusian basis of starvation for the marginal millions, there isn't any economic surplus to speak of.

Any improvement donated from outside—by American aid, for instance—is almost instantly swallowed up in a further explosive increase in population. And how shall you remedy the situation when the people are imbued with religious or cultural objections to limitation of population? Somebody will have to do some fancy bootstrap levitation. Atomic bombs are unpleasant, sure, but so are famines like the one currently restoring the balance between resources and population in China.

Vincent seems also to be wildly optimistic in his figures of possible world farm production; other figures show all but three percent of the world's arable land already in use, even though the use is often inefficient. Nor has Vincent considered the rapid inroads now being made on the world's easily available metallic ores and mineral fuels, or the depletion of water supplies in marginal areas. Irrigation of deserts means further depletion of water, and colonization of the Arctic, depletion of fuels. And the ores and fuels won't grow back no matter how long you wait.—L. Sprague de Camp.

Some people do seem to confuse "better" with "more numerous" human population.

———

Dear Mr. Campbell:

My compliments for running L. Ron Hubbard's article about "The Analytical Mind." To an advertising

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agency worker faced daily with the grim business ideal of adjusting or straitjacketing one's creative thinking to the purported desires of the hypothetical average man, this article was a refreshing boost for the basic human denominator, the Individual. The thought that one can manifest individualistic capacities without necessarily being grist for the booby mill was inspiring after orthodox psychological readings which largely led one to assume that a colorless normalcy is the standard of sanity.

I feel, incidentally, that reader Winstead Doodle Weaver's letter in the same issue verges on the too, too! By being hypercritical about something science fiction writers have to do if characters in their stories are to be people and not grammatical robots. I associate with more than one top-level man, university caliber, who can sling the English when needed in all its classic purity, but who nevertheless uses speech rich in "Nut" and "Stinker" when at ease among friends. True, the informal speech of the far future would not be the same as the informal speech of today —but (a) the science fictionist cannot know the informal speech of the far future, and (b) even if he did know it, he would still have to translate it into the informal speech of today, to have his fiction understood. —Helmuth Bayer, 7828 South Ridgeland Avenue, Chicago 49, Illinois.

And I'll bet the spacemen come up with some fine, wide, but unpredictable terms!

Dear Mr. Campbell:

As a regular reader of Astounding SCIENCE FICTION I should like to offer a solution to the problem given by Rudolph Powell Jr. of Venice, California as stated in the November issue of your magazine.

The problem concerns a club whose members consist of those people and only those people who are secretaries of organizations of which they are not members. Who will be the secretary of that club? And the answer is, obviously, that any member of the club can become secretary. There is no contradiction in assuming that one person can both be secretary of the club and also secretary of some organization of which he is not a member. And the club would still consist of all those people and only those people who are secretaries of organizations of which they are not members.

I agree with Mr. Powell that "Usually, if the reader attempts to note and *justify* each step in situations like this, any seeming paradoxes will forthwith be resolved."—Warren C. Haggstrom, M. B. 642, University Village, 29th & Como Avenues, Minneapolis 14, Minnesota.

Nice solution—but it does weasel just a tiny bit!

———

Dear Mr. Campbell:

If you think it's safe or proper to talk back to a Phi Beta Kappa in print, you might hang this on a Brass Tack to demonstrate—with reason-

able verisimilitude—how much dialogue can change in a few hundred years.

COMPLAYNT OF THE GESTOUR FYFE TO WINSTEAD DOODLES WEAVER, SOMETIME CLERK OF STANNEFORD

(On occasioun of his wishe in *Brasse Nayles* that wordes yspoken in *Astounding* tales be unlyke those of present speche—a dredful rekkelesse thyng to pretche!)

Meseems 'tis naughte but kindly flaterye
That placeth me in goodly compaignye
With suche as Hubbard, Piper, Jones, Munro,
And Blish, and goliardeys de Camp also.

Een thogh thou chidest for the rudeliche
Manour of oure characteres speche,
And thogh I be a smalle "cum laude" atte beste,
I trowe thou spakst some resoun with thyn geste.

Me were leef koude I endite trewe
In speche fyve hundred yeeres newe,
So much ychaunged from the wordes we seye
As oures from this of Geffroi Chaucers day;

For welle I wiste *thou* koudst understonde—
Thogh low felawes scowl throghout the lond
And seyen the storie taketh long to telle—
But thenne my nexte storie may nat selle!

Whoso shal rede a tale moot fynd for resouns
Everich a folk, of alle condiciouns.
Myn tale is made for *al* who rede;
They be nat fewe—and they have also payde!

—F. B. Fyfe

And what fun our proofreaders would have trying to look up those words!

Dear Mr. Campbell:

Another month shot! It is one of my greatest regrets that Astounding comes out only once a month, for within a few scant evenings I have read the monthly issue and must then

wait impatiently until next month. True, there are other sf mags, but until recently, none approached ASF for quality. And now that there are two sf publications which I consider worthy of cover to cover treatment, I find my appetite even more sharp.

But this has all the signs of a long letter, so I'll get to business. Namely, the AnLab.

1. "Follower," by Eric Frank Russell. Pure beauty of concept and execution. And writing!

2. "The Hand of Zei," by L. Sprague de Camp. In the first installment, Sprague had *me* rolling, with laughter. Now he has the plot rolling. He's doing O.K. It strikes me that of all the various planets in this general group of stories, Krishna is the one most adapted for de Camp's sensible nonsense. The Krishnans are so much like people, and yet so different!

3. "Quixote And The Windmill," by Poul Anderson. Another fine job of writing. Not much plot, but I didn't miss it. It was the sort of story that can do without one.

4. "Tools Of The Trade," by Raymond F. Jones. No specific comment, just a good story.

5. "In Value Deceived," by H. B. Fyfe. Clever handling of viewpoint, if not alien psychology.

6. "The Truth About Cushgar," by James H. Schmitz. Hate to give it last place. It was a good story.

Please note that these ratings are only comparative. Every last one was a superior piece of work and in any other issue, any one of them might make first place. As far as stories are concerned, one of your better issues.

As usual, the articles were informing. I'm acquiring quite an education from them, learning more from them, I feel, than I would if ordered to learn.

Miller is constantly improving. When he began, he had some difficulty in drawing people, but no more. A slight blooper in his full page illo for the Jones story. Jones had the spaceships resting horizontally rather than upended as Miller pictured them. Miller can draw a mean alien too. Cartier? I drool. I like his work. But do me a favor and shoot Ward at sunrise, or any convenient time. His drawings seem to lack that certain something. Cover good, but not striking.

Just what and when is this "change" you promised us for this fall, and why "starting"? Is it some long term plan?

Und noo ve kam to ze populaire soobject: Dianetics. While technically, these remarks have no bearing on Astounding, I have no doubt but that Brass Tacks will be filled in months to come with remarks about the controversy that has arisen. Thus far, I have seen little evidence on either side, and no conclusive evidence at all. My investigation into the subject has been limited to a study of the material on said subject in the various periodicals. So far, I have not been able to make any real decision on the merits of Dianetics. I have, however, reached some minor conclusions.

First, I believe that Hubbard is sincere in his claims, though at times a bit flamboyant. I feel that he is convinced that he has what he believes to be conclusive evidence in his possession, and is constantly gathering more authenticated material from sources other than his own research.

Second, that in due time he will present this evidence to the public and to the psychiatric world. He is almost obliged to, after his statement in the New York *Times* (September 9, 1950, p. 19).

Finally, that many of his most vociferous opponents are ignorant of the subject. Though the phrase, "Know thy enemy if you would be victorious," is almost a cliché, it has been largely ignored. In none of the antidianetic statements has there been any claim of a test of either theory or therapy. At least, none in the material I have seen, and I have dug rather deeply. In addition, the attackers have pulled some remarkable boners. Dr. Erich Fromm, throughout his blast, after clutching Hubbard's definition of "engram" to his bosom, used the redundancy "cellular engram." He also seemed to think that by "denyer" Hubbard meant an engram which caused one to claim things were not true, rather than a specific class of engram which in the course of therapy, denies its existence and is, therefore, hard to contact. Dr. Morris Fishbein seemed to think that Dianetics involves ancestral memory. But the prize for foolishness goes to C. Daly King,

Ph.D., who wrote, "... four 'axioms' are presented which for some obscure reasons are called 'dynamics' but which certainly are not axioms in the accepted meaning of the word, for there is nothing self-evident about them." If Korzybski were not already dead, that little classic would have given him heart failure.

One comment on the subject of evidence. What is necessary is both experimental and clinical proof. I have seen a number of statements of "wondrous cures" but these I largely ignore. Unfortunately, these reports resemble remind me of "I've been taking Snake Oil hair tonic for ten years. It's delicious, and it helped my liver."

Frankly, I hope Dianetics is proved in value, for the daily news is not very promising. We need something like Dianetics badly. — Dean McLaughlin.

Validation takes time; a book of dianetic case histories should appear about the first of the year. It will, necessarily, be preliminary in some respects. One case of leukemia appears to be arrested; not less than two years of time—for which there is no substitute—must elapse before we can know. But there now are records in cases of psychotics, one scheduled for prefrontal lobotomy, who is now doing secretarial work in a nearby town. But it takes time to accumulate, arrange and publish data.

Dear Mr. Campbell:

As it happens, I am in a position —by ESP—to answer Mr. Powell's question in the November ASF. It is not generally known, but a mousy little creature named Amelia was elected secretary of this club, of which Mary naturally became president. The first task of the secretary was to type:

"I. The members of this club shall be those people, and only those people, who are secretaries to at least one organization of which they are not members."

My time machine tells me that Amelia is destined to keep this part-time position until 1980, when she is forced by old age to retire from her job as secretary to the other club.— George Whaples, Bloomington, Indiana.

"Elementary, my dear Watson!"

Dear Mr. Campbell:

You "fret" me. Why does the first letter in "Brass Tacks" each month have to be so highly irritating? To get reader reaction I suppose. Well, I don't like to write letters to the editor; in fact I don't like to write letters, but here is my reaction to the effusion of Horan, M.D. and you won't publish *my* letter because I am going to indulge in some personalities.

I worked for more than five years, in a minor executive capacity, at one of the U. S. Veterans Facilities in

another part of the country and had a splendid opportunity to observe psychiatry in action and its finished products, the "beneficiaries" there at the facility—and also the doctors who practice it. I *have* read "Dianetics" and you force me to say that it is the sanest treatise on mental phenomena I have ever had the pleasure of reading, and I have read plenty.

I had often wondered why almost all "psycho-doctors" were as "screwy" as their patients, and had charitably decided that it was probably just superficial habits and mannerisms which they had picked up from constant contact with mental patients; but "engram restimulation" is both logical and sufficient and a much better explanation than my own tentative hypothesis. And some of Dr. Horan's engrams have undoubtedly been restimulated by "the kind of talk I hear from some of the patients in the mental hospital where I am taking psychiatric training." He admits that he is "very confused" and his letter shows it; and I would think that was a favorable gleam at least.

He — Dr. Horan — writes glibly about "established techniques, which . . . are helping to restore to health a great many persons with mental diseases"; and I have seen and worked with many, many of these who have been "restored to health" to the extent that they can be domiciled in a

V.A. barracks where someone else will do all necessary thinking for them, and where they will be cared for as if they were primary-school children. Also their restoration to "health" is just about as permanent as a "permanent wave" in milady's hair; they have to be transferred back to a mental institution for re-treatment at more or less frequent intervals. The Veterans Administration is less optimistic and more accurate when they release their patients from the hospital; their statement is that the patient has received the "maximum benefit from hospitalization."

My observation long ago convinced me that a great many—not all—psychiatrists must have taken up mental diseases because they were not competent to diagnose or treat an actual physical ailment. If a doctor cannot diagnose an inflamed appendix until it ruptures, it is apt to produce unfavorable comment, but any diagnosis seems to be valid in the nebulous haze of psychiatry. I can sympathize with Dr. Horan in insisting on the value of his psychiatric training, but I would like to quote a sentence from one of "Old Gorgon Graham's" letters to his son. "Just because a man has been a fool for twenty-one years, is no reason that he should be a fool for twenty-one years and fifteen minutes."

You have my reaction. You're welcome.—C. H. Price, Jr., 423 Alabama Street, Montgomery, Alabama.

No comment!

Dear Mr. Campbell:

Your comment on the letter of Doodles Weaver is rather interesting. We wish that you would communicate that message to some of those whose stories you have already printed. When a well-known s-f author has to supply his potential readers with a little pronunciation guide before they can sit back to enjoy his four-part story, the created has begun to control its creator.

It's high time that we had a little less of some author's linguistic nightmares. These inevitably italicized words constitute knots in the otherwise smooth thread of the narrative. At least, we think so.

As the male member of this team, maybe I have the more legitimate gripe. After arduous hours at the missile factory with a doctoral thesis waiting for me, two sons to bathe and put to bed, and a stack of dishes to dry, I seek relaxation, inspiration and escape when I pick up a copy of ASF. Frankly, it's a pain in the neck to have to keep stumbling over a flock of abortive attempts to simulate an extraterrestrial language. It's a terrific block to complete empathy, I assure you.

Or would Hubbard charge the above to a bunch of prenatal engrams? Nevertheless, I should like to meet the man who sets your type.—Bob and Rae Davis, 71-01 Little Neck Parkway, Glen Oaks Village, Queens, New York.

Well, one interesting thing is that a linotypist doesn't have to read the

context of what he sets—he can just set letters. We'll try to cut down on the italics, though!

———

Dear Editor:

I have been reading Astounding since back in the early thirties and it still rates tops with me as a science-fiction magazine. I especially like the articles which are a source of unending interest to me.

In your November issue I rate the article "The General Adaptation Syndrome," by Dr. Winter as the tops. Following this is Raymond Jones, "Tools of the Trade"; "The Hand of Zei," by L. Sprague de Camp and "The Truth About Cushgar," by James Schmitz, I rate tied for the next spot; "Follower," was next by Eric Russell. The remaining two I did not particularly care about, although they were worth reading, but that is about all.

I would like to see some more of E. E. Smith's stories, especially along the lines of the Lensman. Also George O. Smith, A. E. Van Vogt, Isaac Asimov, Lloyd Eshbach and a few articles on modern trends in rockets by Willy Ley and possibly a cover by Chesley Bonestell although that sounds like a rather large order.

I recently saw the motion pictures "Rocketship X-M" and "Destination Moon," of the two "Destination Moon" was much more down to earth from a scientific standpoint, as "Rocketship X-M" was rather sloppily handled, especially the dubbed in shots with the V-2 as the landing platform could be seen in the so-called landing on Mars, not all of it but the trip cord from the V-2's nose could be seen. "Destination Moon" was well planned and interesting from every aspect of the picture.

Yours for more of the same and better stories and articles.—Vernon J. Basore, 2639 Harriet Avenue, Minneapolis, Minnesota.

"Destination Moon" seems to be starting a new series of seriously, carefully handled science-fiction pictures.

———

Dear John:

Allow me to congratulate you and Artist Pattee on what is not only by a long margin the best cover-picture that has ever appeared on a magazine in the science/fantasy field, but is also one of the finest symbolic pictures it has ever been my privilege to see. I refer, of course, to the cover "Choice" on the November '50 ASF.

The entire issue rates (65) Very Good; with the cover getting (120) for an all-time high; "The Truth About Cushgar" (75) rating top-story honors and "Tools of Trade" (50) and "In Value Deceived" (48) nearly tied, but running 2-3 in that order.

You may wonder why I haven't rated the serial. To tell you the truth, I just can't wade through it. From the very first one of this series which appeared the style has had me "buffaloed." I know de Camp can write a lucid, moving story if he wishes, so I guess this is just an experiment to see what he can do. As far as I'm concerned, it's just so many blank pages in your magazine.

In the October issue I enjoyed the "Enchanted Forest," which rated about (50), with the entire issue rating about (35) a little below average. The announcement of the Readers' Choice project intrigued me and I'm sorry I won't be of much help to you, since I have to rely on my memory—my entire file of magazines (plus a "few" other things) was destroyed in a fire during the war which burned down my house. If you eliminate serials and those stories which have appeared in book form, the only titles which occur to me at the moment are those in the "gifted children" series which began a year or so ago, plus a little gem "Forgetfulness" by one D. Stuart. I am sure there are others which are worthy, and I only wish I was able to help you select the complete list.—Lamont M. Jensen, 827 Downing Avenue, Salt Lake City 5, Utah.

Pattee made a lot of friends with that cover!

———

Dear John:

Apropos of Mr. de Courcy's letter in the December '50 ASF: Re Keely, I quote from Hering's "Foibles and Fallacies of Science": "It was not until after Keely's death that the fraudulent nature of his scheme was established. It was then brought out by an examination of his laboratory after the motor had been removed, and it was found that the extraordinary performances of his complicated machinery were controlled from a cellar in which a source of motive power was operated. This source of power was not actually identified but pipes and connections seemed to indicate pretty plainly that it was compressed air, which could be manipulated by the demonstrator in the laboratory. Yet his real secret has never been re-

vealed. The motor was taken to Boston and set up, but it failed to exhibit any "etheric force" when subjected to any vibratory influence, after its removal from the laboratory in Philadelphia."

This is, of course, a more accurate and detailed statement of the case than I had room for. I could likewise quote accounts of the Abrams device from *Hygeia* and the *Scientific American*, but if I had done so in all the cases cited the article would quickly have ballooned into a book—which, at that, I may write some day. Any such summary treatment of a large subject is bound to entail some oversimplification.

I quite agree with Mr. de Courcy that exhaustive debunking of pseudoscientific claims and assertions is desirable; I do my little bit when and as I can. However, man is an economic as well as a scientific—or pseudoscientific—animal; writers have to eat; men are much more willing to pay cash to be bunked than they are to be debunked. As a result—as I have learned the hard way—you can't make a living solely by debunking, though a few like Bell, Jastrow, Fishbein, Hering, and Redgrove have taken a crack at it from time to time. If Mr. de Courcy finds some of their and my remarks superficial or overdogmatic, he is welcome to improve on them; but he will find it a labor of love.—L. Sprague de Camp.

For a writer, it's certainly a labor of love. But universities and research foundations should hold it as their public and scientific duty.

Dear Mr. Campbell:

It is not my policy to write "fan letters" but I feel that you deserve great credit for the imagination and taste of the recent cover by Pattee on your November issue. Thank you for this inspirational and symbolic cover of our confused times, so aptly entitled "Choice." The utter frailty of Man against the uncontrollable cataclysm of released Force is done with tremendous sensitivity. May I sincerely hope that you may use more of this artist's effective work for your covers.

Good luck with Astounding SCIENCE FICTION.—Philip H. Cummings, P.O. Box 389, Woodstock, Vermont.

The original of that cover was acquired—by telegraph request!—by Argonne National Laboratories researchers.

Dear Mr. Campbell:

This note will be devoted mainly, as usual, to the AnLab.

1. "The Hand Of Zei," by L. Sprague de Camp. I guess I just like de Camp's stuff. Unlike most humorists, de Camp's humor is of the logical rather than zany type. It's a lot more fun that way.

2. "Bindlestiff," by James Blish. Better than I expected. Blish, as well as some others I could name, tend to set up a very complicated situation, like a line of dominoes, then, presto, everything happens at once in a confusing mess, and the next the reader knows, the story is over. This story was less confusing than "Okie," but still had a touch of that quality. Don't get me wrong, I liked the story, but look out for "house-of-cards-ism."

3. "A Subway Named Mobius," by A. J. Deutsch. I'll let the math boys wrangle over this one. But, being myself familiar with the Boston subway setup—for some reason, they call it the Boston Elevated, even though it is mostly underground or at street level—I found it an interesting satire on the nation's nuttiest transit system.

4. "Compromise," by H. B. Fyfe.

5. "The Curfew Tolls," by J. T. M'Intosh.

6. "Foundling," by Donald Baker Moore.

Article fine. Now imagine a situation where a sane man is crazy by local standards. Is that a paradox, or an impossibility?

Timmins is back. And good. His interior work was his best ever. His cover equally good. We've seen too little of both him and Schneeman lately. Cartier was his usual magnificent self.

I suspect something fancy next month. That "Times To Come" column didn't fit. And next issue starts year twenty-one!—Dean McLaughlin, 1214 W. Washington Street, Ann Arbor, Michigan.

That sane man paradox exists—the Dobu Islanders, having a paranoid culture, consider a non-paranoid insane!

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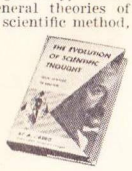

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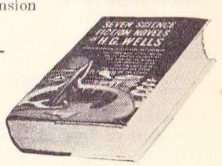

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