

STORIES OF IMAGINATION
FANTASTIC

PAINGOD, by Harlan Ellison

JUNE
50¢
▲
6
●

ILUSION, by Jack Sharkey



ROBERT
ADRIANA

IN JUNE AMAZING:

tin lizzie

THE "MODEL T" ROCKETSHIP

was parked on one of the planet's moons years ago. NOW someone must be found who can fly the relic—otherwise men will die. Randall Garrett's suspense-filled story is a haunting tribute to the men who "built 'em to last in the old days."



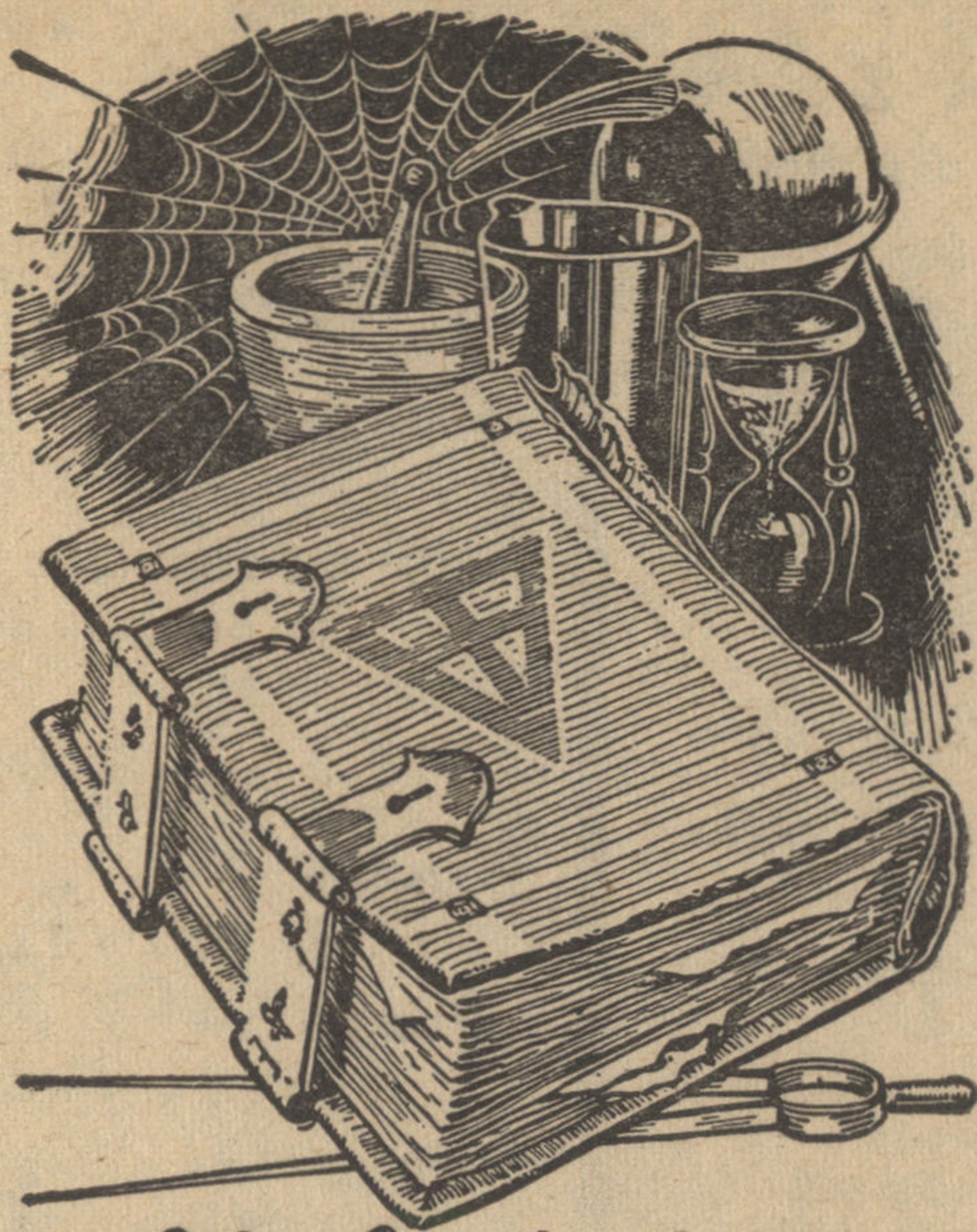
ALSO:

Sam Moskowitz profiles one of the outstanding British SF writers of our day: John Wyndham, author of **DAY OF THE TRIFFIDS** and **THE MIDWICH CUCKOOS**.

**IF YOU'RE LOOKING FOR ADVENTURE AND SUSPENSE
PICK UP A COPY OF JUNE AMAZING.**

NOW ON SALE . . . Only 50¢

FANTASTIC, Stories of Imagination, Vol. 13, No. 6, June 1964, is published monthly by Ziff-Davis Publishing Company, at 434 South Wabash Avenue, Chicago, Illinois 60605. (Ziff-Davis also publishes—Popular Photography, Popular Electronics, Electronics World, HiFi/Stereo Review, Popular Boating, Car and Driver, Flying, Modern Bride and Amazing Stories.) Subscription rates: One year United States and possessions \$4.00; Canada and Pan American Union Countries \$4.50; all other foreign Countries \$5.00. Second class postage paid at Chicago, Illinois and at additional mailing offices.



Secrets
entrusted
to a
few

The Unpublished Facts of Life

THERE are some things that cannot be generally told — *things you ought to know*. Great truths are dangerous to some — but factors for *personal power* and *accomplishment* in the hands of those who understand them. Behind the tales of the miracles and mysteries of the ancients, lie centuries of their secret probing into nature's laws — their amazing discoveries of *the hidden processes of man's mind*, and *the mastery of life's problems*. Once shrouded in mystery to avoid their destruction by mass fear and ignorance, these facts remain a useful heritage for the thousands of men and women who privately use them in their homes today.

THIS FREE BOOK

The Rosicrucians (not a religious

organization) an age-old brotherhood of learning, have preserved this secret wisdom in their archives for centuries. They now invite you to share the *practical helpfulness of their teachings*. Write today for a free copy of the book, "The Mastery of Life." Within its pages may lie a new life of opportunity for you. Address: Scribe K.F.J.

SEND THIS COUPON

Scribe K.F.J.

The ROSICRUCIANS (AMORC)
San Jose, California

Please send me the *free* book, *The Mastery of Life*, which explains how I may learn to use my faculties and powers of mind.

Name _____

Address _____

City _____

The Rosicrucians (AMORC) SAN JOSE, CALIFORNIA, U.S.A.

FANTASTIC

STORIES OF IMAGINATION

JUNE

1964

Volume 13

Number 6

REG. U. S. PAT. OFF

ZIFF-DAVIS PUBLISHING COMPANY

William B. Ziff, Chairman of the Board
(1946-1953)

William Ziff, President

W. Bradford Briggs, Executive Vice
President

Hershel B. Sarbin, Vice President and
General Manager

M. T. Birmingham, Jr., Vice President
and Treasurer

Walter S. Mills, Jr., Circulation Director

Stanley R. Greenfield, Vice President

Phillip T. Heffernan, Vice President

Editorial Director
NORMAN M. LOBSENZ

Editor
CELE GOLDSMITH

Ziff-Davis Publishing Company
Editorial and Executive Offices
One Park Avenue
New York, New York 10016
212 OREGON 9-7200
Advertising Manager,
Harold Cymes

Midwestern and Circulation Office
434 South Wabash Avenue
Chicago, Illinois 60605
312 WABASH 2-4911

Western Office
9025 Wilshire Boulevard
Beverly Hills, California 90211
213 CRESTVIEW 4-0265

NOVELETS

TESTING

By John J. McGuire 16

BODY OF THOUGHT

By Albert Teichner 66

FROM THE BEGINNING (Fantasy Classic)

By Eando Binder 102

SHORT STORIES

PAINGOD

By Harlan Ellison 6

ILLUSION

By Jack Sharkey 58

GENETIC CODA

By Thomas M. Disch 92

FEATURES

EDITORIAL 5

COMING NEXT MONTH 14

Cover: Robert Adragna

Illustrating Paingod

SUBSCRIPTION SERVICE: All subscription correspondence should be addressed to FANTASTIC, Circulation Department, 434 South Wabash Avenue, Chicago, Illinois. Please allow at least six weeks for change of address. Include your old address, as well as new—enclosing if possible an address label from a recent issue.

EDITORIAL CONTRIBUTIONS must be accompanied by return postage and will be handled with reasonable care; however publisher assumes no responsibility for return or safety of art work, photographs or manuscripts.

Copyright © 1964 by Ziff-Davis Publishing Company. All rights reserved.



ONE of the finest apologias for fantasy (if indeed any apologia is needed), was made recently by literary critic Edmund Fuller. Writing in the *Book Review* section of *The New York Times*, Fuller pointed out the diversity of the fantastic story, the timeless appeal it has for the man of imagination, and its value to the creative imagination in projecting the full dimensions of "the so-called real."

"Good fantasy is not escapist," Fuller declared. "It may offer temporary relief . . . from the pressure of the immediate world, but at the same time we are given new perceptions of our actual lives. We respond freshly to honor, courage, aspiration, and beauty. . . . To cling to them in our daily world is a hard struggle. Yet without consciousness of such qualities life is immeasurably debased. . . ."

"So much of existence remains a mystery . . . that the best approach to many experiences is best made through imaginative symbols and images. . . . Fantasy is an art of equivalents. It sets before us existences other than, but related to, our own."

Fuller cites C. S. Lewis (especially for his *Out of the Silent Planet* trilogy), Charles Williams (for his seven unfortunately little-known supernatural thrillers), and J. R. Tolkien (*The*



EDITORIAL

Lord of the Rings trilogy) as three of the greatest masters of fantasy in our time. (Lewis and Williams are dead.) He urges any fantasy lover to read the earlier novels of a Scotsman, George Macdonald, who influenced all three of the other men with his fantasy novels.

Turning to American writers, Fuller calls Walter M. Miller Jr.'s *A Canticle for Leibowitz* "a memorable fantasia on the past and future of Western man and the nuclear age." Of course most sf and fantasy aficionados would consider *Canticle* science-fiction rather than fantasy, but who can cavil at a man who concludes, thusly:

"Some people are color blind; some, tone deaf; some, impervious to fantasy. All such are grievously afflicted."



Illustrator DILLON

PAINGOD

By HARLAN
ELLISON

Always man asks: "If God is good, why does He send us pain and misery?" In this brilliantly conceived story, Harlan Ellison, returning to s-f after a long absence, ventures a theory. Ellison, successful currently as a mainstream writer of books, movies and television scripts, is now 29, single, a Hollywood denizen, and says he packs a Remington XP-100 instead of a Beretta.

TEARS were impossible, yet tears were his heritage. Sorrow was beyond him, yet sorrow was his birthright. Anguish was denied him; even so, anguish was his stock in trade. For Trente, there was no unhappiness; nor was there joy, concern, discomfort, age, time, feeling.

And this was as the Ethos had planned it.

For Trente had been appointed by the Ethos—the race of somewhere/somewhen beings who morally and ethically ruled the universes—as their Paingod. To Trente, who knew neither the tug of time nor the crippling demands of the emotions, fell the forever task of dispensing pain

and sorrow to the myriad multitudes of creatures that inhabited the universe. Whether sentient or barely capable of the feeblest unicellular reaction-formation, Trente passed along from his faceted cubicle invisible against the backdrop of the changing stars, unhappiness and misery in proportions too completely arrived-at to be verbalized.

He was Paingod for the universes, the one who dealt out the tears and the anguish and the soul-wrenching terrors that blighted life from its first moment to its last. Beyond age, beyond death, beyond feeling—lonely and alone in his cubicle—Trente went about his business.

Trente was not the first Paingod, there had been others. They had come before, not too many of them, but a few, and why they no longer held their post was a question Trente had never asked. He was the chosen one from a race that lived almost indefinitely, and his job was to pass along the calibrated and measured dollops of melancholy as prescribed by the Ethos. It involved no feeling and no concern, only attention to duty. It was his position, and it was his obligation. How peculiar it was, that he felt concern, after all this time.

It had begun so long before—and of time he had no conception—that the only marking-date with validity was that in the great ocean soon to become the Gobi Desert, paramecium had become more prevalent than amoeba. It had grown in him through the centimetered centuries as layers and layers of forever settled down like mist to form the stratum of the past.

Now, it was now.

DESPITE the strange ache in his nerve-gland, his *central* nerve-gland; despite the progressive dulling of his eye globes; despite the mad thoughts that spit and stuttered through his triple-domed cerebrum, thoughts of which he knew he was incapable, Trente performed his now functions as he was required:

He dispensed unbearable anguish to the residents of a third-power planet in the Snail Cluster, supportable agony to a farm colony that had sprung up on Jacopettii U, incredible suffering to a parentless spider-child on Hiydyg IX, and relentless torment to a blameless race of mute aborigines on a nameless, arid planet circling a dying sun of the 707 System.

And through it all, Trente suffered for his charges.

What could not be, was. What could not come to pass, had. The soulless, emotionless, regimented creature that the Ethos had named Paingod, had contracted a sickness. Concern. He cared. At last, after centuries too filed-away to unearth and number, Trente had reached a now in which he could no longer support his acts.

The physical manifestations of his mental upheaval were numerous. His oblong head throbbed and his eye globes were dulling, a little more each decade; the interlinked duodenal ulcers so necessary to his endocrinal system's normal function had begun to misfire like faulty plugs in an old car; the thwack! of his salamander tail had grown weaker, indicating his motor responses to nerve-endings were feebler. Trente—who had always been considered rather a handsome example of his race—had slowly

come to look forlorn, weary, even a touch pathetic.

And he sent down woe to an armored, flying creature with a mite-sized brain on a dark planet at the edge of the Coalsack; he dispatched fear and trembling to a smoke-like wraith that was the only visible remains of a great race which had learned to dispense with its bodies centuries before, in the sun known as Vertel; he conscientiously winged terror and unhappiness and misery and sadness to a group of murdering pirates, a clique of shrewd politicians and a brothel-ful of unregenerate whores—all on a fifth-power planet of the White Horse Constellation.

Stopped alone there, in the night of space, his mind spiraling now for the first time down a strange and disquieting chamber of thought, Trente twisted within himself. I've been selected because I lack the certain difficulties I now manifest. What is this torment? What is this unpleasant, unhappy, unrelenting feeling that gnaws at me, tears at me, corrupts my thoughts, colors darkly my every desire? Am I going mad? Madness is beyond my race; it is a something we have never known. Have I been at this post too long, have I failed in my duties, if there was a God stronger than the God that I am, or a God stronger than the Ethos Gods, then I would appeal to that

God. But there is only silence and the night and the stars, and I'm alone, so alone, so God all alone here, doing what I must, doing my best.

And then, finally: I must know. I must *know!*

. . . while he spun a fiber of melancholy down to a double-thoraxed insect-creature on Io, speared with dread a blob of barely sentient mud on Acaras III, pain-goaded into suicide an electrical wave being capable of producing exquisite 15-toned harmonics on Syndon Beta V, reduced by half the pleasures of a pitiable slug thing in the methane caves of Kkklll IV, enshrouded in bitterness and misery a man named Colin Marshack on an insignificant planet called Sol III, Earth, Terra, the world . . .

And then, finally: I *will* know. I will *know!*

Trente removed the scale model of Earth from the display crate, and stared at it. Such a tiny thing, such a helpless thing, to support the nightwalk of a Paingod.

He selected the most recent recipient of his attentions, through no more involved method than that, and used the means of travel his race had long since perfected, to leave his encased cubicle hanging translucent against the stars. Trente, Pain god of the universes, for the first

time in all the centuries he had lived that life of giving, never receiving, left his place, and left his now, and went to find out. To find out . . . what? He had no way of knowing.

For the Paingod, it was the first nightwalk.

PIETER KOSLEK had been born in a dwarf province of a miniscule Central European country long since swallowed up by a tiny power now a member of the Common Market. He had left Europe early in the 1920's, had shipped aboard a freighter to Bolivia, and after working his way as common deckhand and laborer through half a dozen banana republics, had been washed up on an inland shore of the United States in 1934. He had promptly gone to earth, gone to seed, and gone to fat. A short stint in a CCC camp, a shorter stint as a bouncer in a Kansas City speak, a term in the Illinois State Workhouse, a long run on the Pontiac assembly line making an obscure part for an obscure segment of a B-17's innards, a brief fling as owner of a raspberry farm, and an extended period as a skid row-frequenting wino summed up his life. Now, as *now* would be reckoned by any sane man's table, Pieter Koslek was a wet brain—an alcoholic so sunk in the fumes and vapors of his own liquor need that he was barely recognizable

as a human being. Lying soddenly, but quietly, in an alley two blocks up from the Greyhound bus station in downtown Los Angeles, Pieter Koslek, age 50, weight 210, hair filth grey, eyes red and moist and closed, unceremoniously died. That simply, that unconcernedly, that uneventfully for all the young-old men in overlong GI surplus overcoats who passed by that alley mouth unseeing, uncaring—Pieter Koslek died. His brain gave out, his lungs ceased to bellow, his heart refused to pump, his blood slid to a halt in his veins, and the breath no longer passed his lips. He died. End of story, beginning of story. As he lay there, half-propped against the brick wall with its shredded reminder of a lightweight boxing match between two stumblebums long since passed into obscurity and the files of *Boxing Magazine*, a thin tepid vapor of pale green came to the slimy, useless body of Pieter Koslek; touched it; felt of it; entered it; Trente was on the planet Earth, Sol III.

If it had been possible to mount an epitaph on bronze for the wet brain, there on the wall of the alley perhaps, the most fitting would have been: HERE LAY PIETER KOSLEK. NOTHING IN HIS LIFE BECAME HIM SO MUCH AS THE LEAVING OF IT.

* * *

Colin Marshock walking the

streets, did not even realize the rheumy-eyed old man was following him. Then he turned, and the old man almost ran into him. "Something I can do for you?" Colin Marshack asked.

The old man grinned feebly, his pale gums exposing themselves above gap-toothed ruin. "Nosir, nuh-nosir, I've just, uh, I was uh just follerin' along to see maybe I could tap yuh for a coupla cents 'tuh get some chick'n noodle soup. It's kinda cold . . . 'n I thought, maybe . . ."

Colin Marshack's wide, somehow-humorous face settled into understanding lines. "You're right, old man, it's cold, and it's windy, and it's miserable, and I think you're entitled to some goddam chicken noodle soup. God knows *someone's* entitled." He paused a beat, added, "Maybe me."

He took the old man by the arm, seemingly unaware of the rancid, rotting condition of the cloth. They walked along the street outside the Park, and turned into one of the many side routes littered with one-arm beaneries and 40¢ a night flop-houses.

"And possibly a hot roast beef sandwich with gravy all over the French fries," Colin added, steering the wine-smelling old derelict into a restaurant.

OVER coffee and a bear claw, Colin Marshack stared at the old man. "Hey, what's your name?"

"Pieter Koslek," the old man murmured, hot vapors from the thick white coffee mug rising up before his watery eyes. "I've, uh, been kinda sick, y'know . . ."

"Too much sauce, old man," said Colin Marshack. "Too much sauce does it for a lot of us. My father and mother both. Nice folk, loved each other, they went to the old alky's home hand-in-hand. It was touching."

"You're kinda feelin' sorry for y'self, ain'tcha?" noted Pieter Koslek. And looked down at his coffee hurriedly.

Colin stared across angrily. Had he sunk that low, that quickly, that even the seediest cockroach-ridden bum in the gutter could snipe at him, talk up to him, see his sad and sorry state? He tried to lift the coffee cup, and the cream-laced liquid sloshed over the rim, over his wrist. He yipped and set the cup down quickly.

"Your hands shake worse'n mine, mister," Pieter Koslek noted. It was a curious tone, somehow devoid of feeling or concern—more a statement of observation.

"Yeah, my hands shake, Mr. Koslek *Sir*. They shake because I make my living cutting things out of stone, and for the past two

years I've been unable to get anything from stone but tidy piles of rock-dust."

Koslek spoke around a mouthful of cruller. "You uh you're one'a them statue makers, what I mean a sculpt'r."

"That is precisely what I am, Mr. Koslek Sir. I am a capturer of exquisite beauty in rock and plaster and quartz and marble. The only trouble is, I'm no damned good, and I was never *ever* really very good, but at least I made a decent living selling a piece here and there, and conning myself into thinking I was great and building a career, and even Canaday in the *Times* said a few nice things about me. But even *that's* turned to rust now. I can't make a chisel do what I want it to do, I can't sand and I can't chip and I can't carve dirty words on sidewalks if I try."

Pieter Koslek stared across at Colin Marshack, and there was a banked fire down in those rheumy, sad old eyes. He watched and looked and saw the hands shaking uncontrollably, saw them wring one against another like mad things, and even when interlocked, they still trembled hideously.

And

Trente, locked within an alien shell, comprehended a small something. This creature of puny carbon atoms and other substances that could not exist for

an instant in the rigorous arena of space, was dying. Inside, it was ending its life-cycle, because of the misery Trente had sent down. Trente had been responsible for the quivering pain that sent Colin Marshack's hands into spasms. It had been done two years before—by Colin Marshack's time—but only a few moments earlier as Trente knew it. And now it had changed this creature's life totally. Trente watched the strange human being, a product of little, introverted needs and desires, here on this mudball circling a nothing star in a far outpost of nowhere. And he knew he must go further, must experiment further with his problem. The green and transparent vapor that was Trente seeped out of the eyes of Pieter Koslek, and slid carefully inside Colin Marshack. It left itself wide open, flung itself wide open, to what tremors governed the man. And Trente felt the full impact of the pain he so lightly dispensed to all the living things in the universes. It was potent hot all! And it was a further knowing, a greater knowledge, a simple act that the sickness had compelled him to undertake. By the fear and the memory of all the fears that had gone before, Trente knew, and knowing, had to go further. For he was Pain-god, not a transient tourist in the country of pain. He drew forth

the mind of Marshack, of that weak and trembling Colin Marshack, and fled with it. Out. Out there. Further. Much further. Till time came to a slithering halt and space was no longer of any consequence. And he whirled Colin Marshack through the universes. Through the infinite allness of the space and time and motion and meaning that was the crevice into which Life had sunk itself. He saw the blobs of mud and the whirling winged things and the tall humanoids and the cleat-treaded half-men/half-machines that ruled one and another sector of open space. He showed it all to Colin Marshack, drenched him in wonder, filled him like the most vital goblet the Ethos had ever created, poured him full of love and life and the staggering beauty of the cosmos. And having done that, he whirled the soul and spirit of Colin Marshack down down and down to the fibrous shell that was his body, and poured that soul back inside. Then he walked the shell to the home of Colin Marshack . . . and turned it loose.

WHEN the sculptor awoke, lying face down amidst the marble chips and powder-fine dust of the statue, he saw the base first; and not having recalled even buying a chunk of stone that large, raised himself on his hands, and his knees, and

his haunches, and sat there, and his eyes went up toward the summit, and seemed to go on forever, and when he finally saw what it was he had created—this thing of such incredible loveliness and meaning and wisdom—he began to sob. Softly, never very loud, but deeply, as though each whimper was drawn from the very core of him.

He had done it this once, but as he saw his hands still trembling, still murmuring to themselves in spasms, he knew it was the one time he would ever do it. There was no memory of how, or why, or even of when . . . but it was *his* work, of that he was certain. The pains in his wrists told him it was.

The moment of truth stood high above him, resplendent in marble and truth, but there would be no other moments.

This was Colin Marshack's life, in its totality, now.

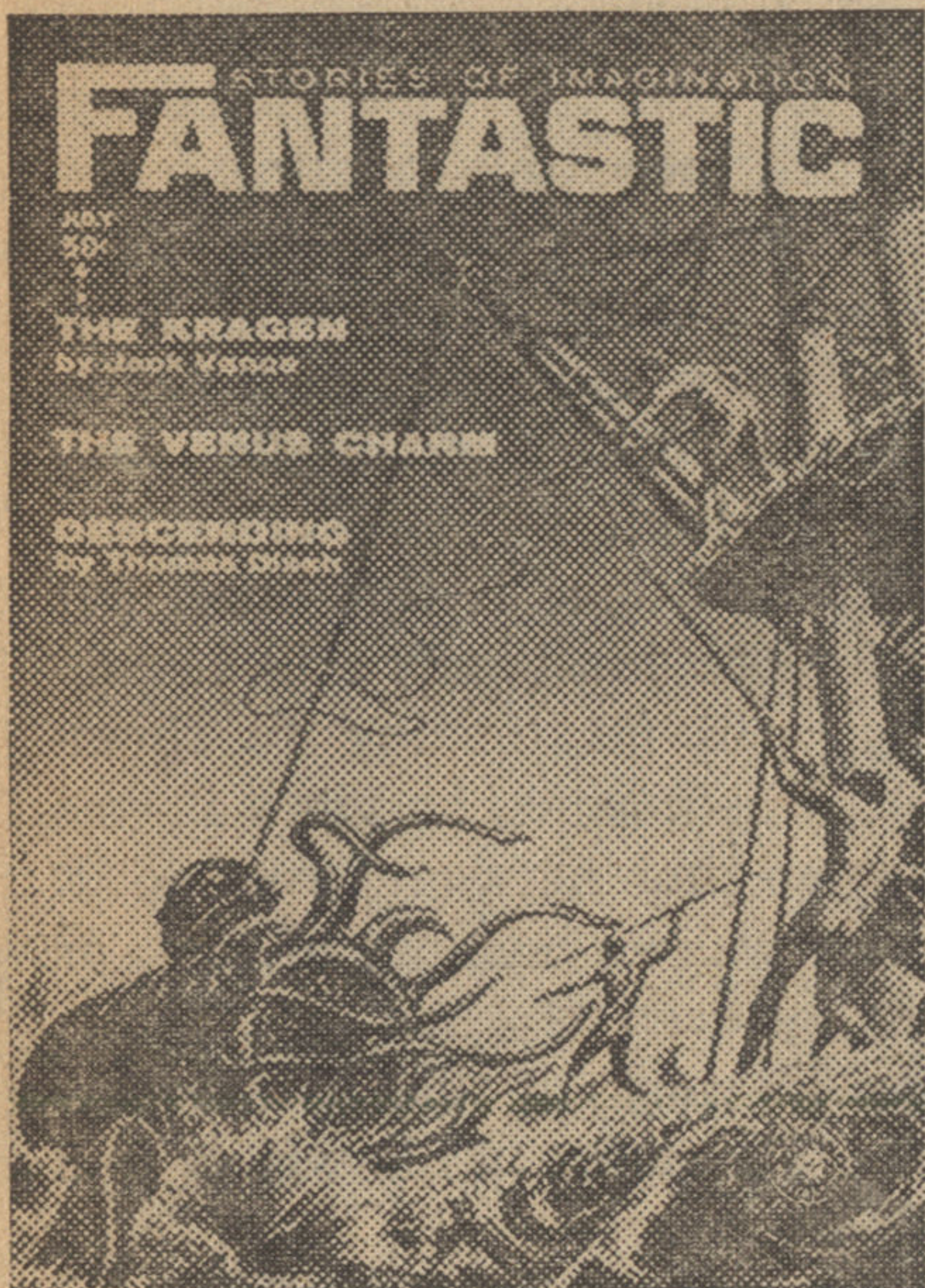
The sound of sobbing was only broken periodically, as he began to drink.

WAITING. The Ethos waited. Trente had known they would be. It was inevitable. Foolish for him to conceive of a situation in which they would not have an awareness.

Away. From your post, away.

"I had to know. It has been growing in me, a live thing in me. I had to know. It was the only

COMING NEXT MONTH



Fantasy master **Jack Vance** headlines the July issue of FANTASTIC with a new short novel, The Kragen. Skillfully, Vance creates a strange and distant world, with a new kind of language, a new kind of villain, a new kind of hero.

Also in the July FANTASTIC **Jack Sharkey** tells us about the puzzling predicament posed by The Venus Charm, and **Thomas Disch** takes us for a different kind of trip in his unusual Descending. Plus other stories and our regular features. Don't miss the July FANTASTIC, on sale at newsstands June 18.

way. I went to a planet, and lived within what they call 'men' and knew. I think I understand now."

Know. What is it you know?

"I know that pain is the most important thing in the universes. Greater than survival, greater than love, greater even than the beauty it brings about. For without pain there can be no pleasure. Without sadness there can be no happiness. Without misery, there can be no beauty. And without these, life is endless, hopeless, doomed and damned."

Adult. You have become adult.

"I know . . . this is what became of the other Paingods before me. They grew into concern, into knowing, and then . . ."

Lost. They were lost to us.

"They could not take the step; they could not go to one of the ones to whom they had sent pain, and learn. So they were no use as Paingod. I understand. Now I know, and I am returned."

Do. What will you do?

"I will send more pain than ever before. More and greater."

More? You will send more?

"Much more. Because now I understand. It is a grey and a lonely place in which we live, all of us, swinging between desperation and emptiness, and all that makes it worthwhile is caring, is beauty. But if there was no opposite for beauty, or for pleasure, it would all turn to dust."

Being. Now you know who you are.

"I am most blessed of the Ethos, and most humble. You have given me the highest, kindest position in the universes. For I am the God to all men, and to all creatures small and large, whether they call me by name or not. I am Paingod, and it is my life however long it stretches, to treat them to the finest they will ever know. To give them pain, that they may know pleasure. Thank you."

And the Ethos went away, secure that at last, after all the eons of Paingods who had broken under the strain, who had lacked the courage to take that night-walk, they had found one who would last truly forever. Trente had come of age.

While back in the cubicle, hanging star-bright and translucent in space, high above it all, yet very much part of it all, the creature who would never die, the creature who had lived within the rotting body of Pieter Koslek and for a few fleet moments in the soul and talent of Colin Marshack, that creature called Paingod, learned one more thing, as he stared at the tiny model of the planet Earth he had known.

Trente knew the feel of a tear formed in a duct and turned free from an eye globe and cool on his face.

Trente knew happiness.

PAINGOD

WANT GENIUS LEVEL I.Q.?

Genius level intelligence, science now says, may be mainly mental skills. We prove it by teaching Basic Psychodynamics to people below genius level, raising I.Q. type abilities 20, 45, or even 70 points. Not a parlor trick but a serious training program. Get our course in Basic Psychodynamics and help your mind gain brilliant mental power. Just send a \$5 check or money order with your name and address.

Psychodynamic Research Council
Dept. A-10, P.O. Box 661
Bloomfield, New Jersey

We have a limited supply of back issues of FANTASTIC that can be ordered on a first come, first served basis. Fill in the coupon below, enclose your remittance in the amount of 65¢ per issue and mail.

ZIFF-DAVIS SERVICE DIVISION
Dept. BCF, 589 Broadway
New York 12, New York

Please send the following back issues of FANTASTIC.

I am enclosing _____ to cover cost of the magazine, shipping and handling.

Month _____ Year _____

Month _____ Year _____

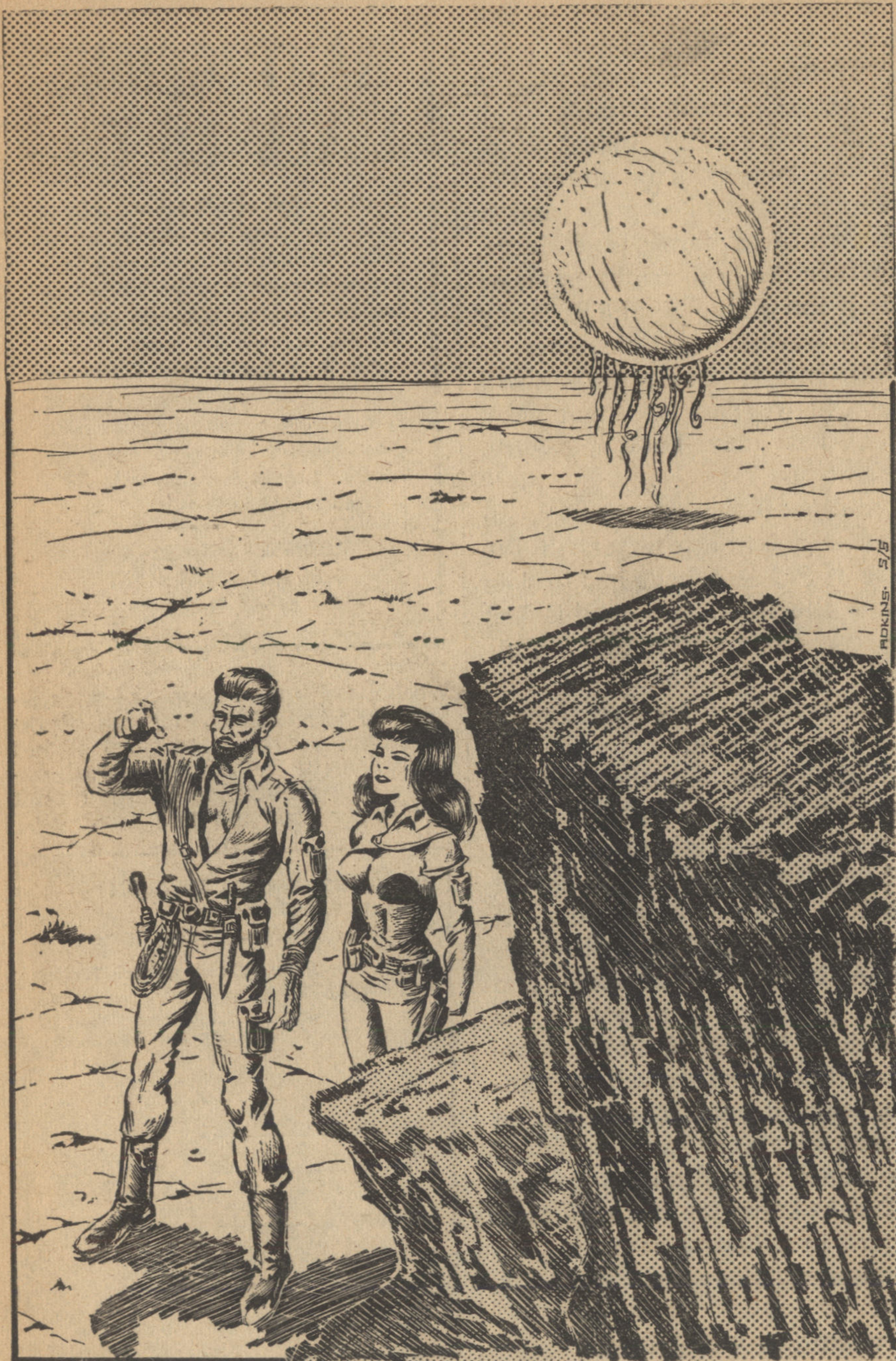
Month _____ Year _____

Address _____

Name _____

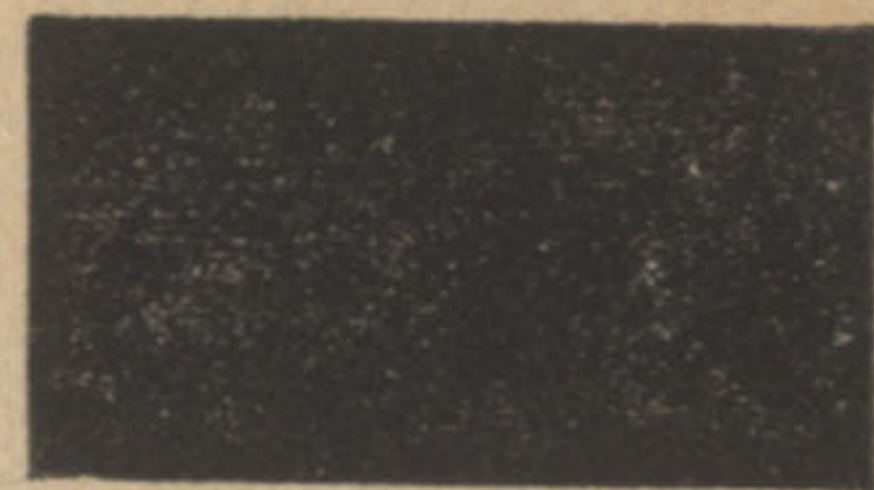
City _____ Zone _____ State _____

No charge or C.O.D. orders please.



ADKINS. S/B

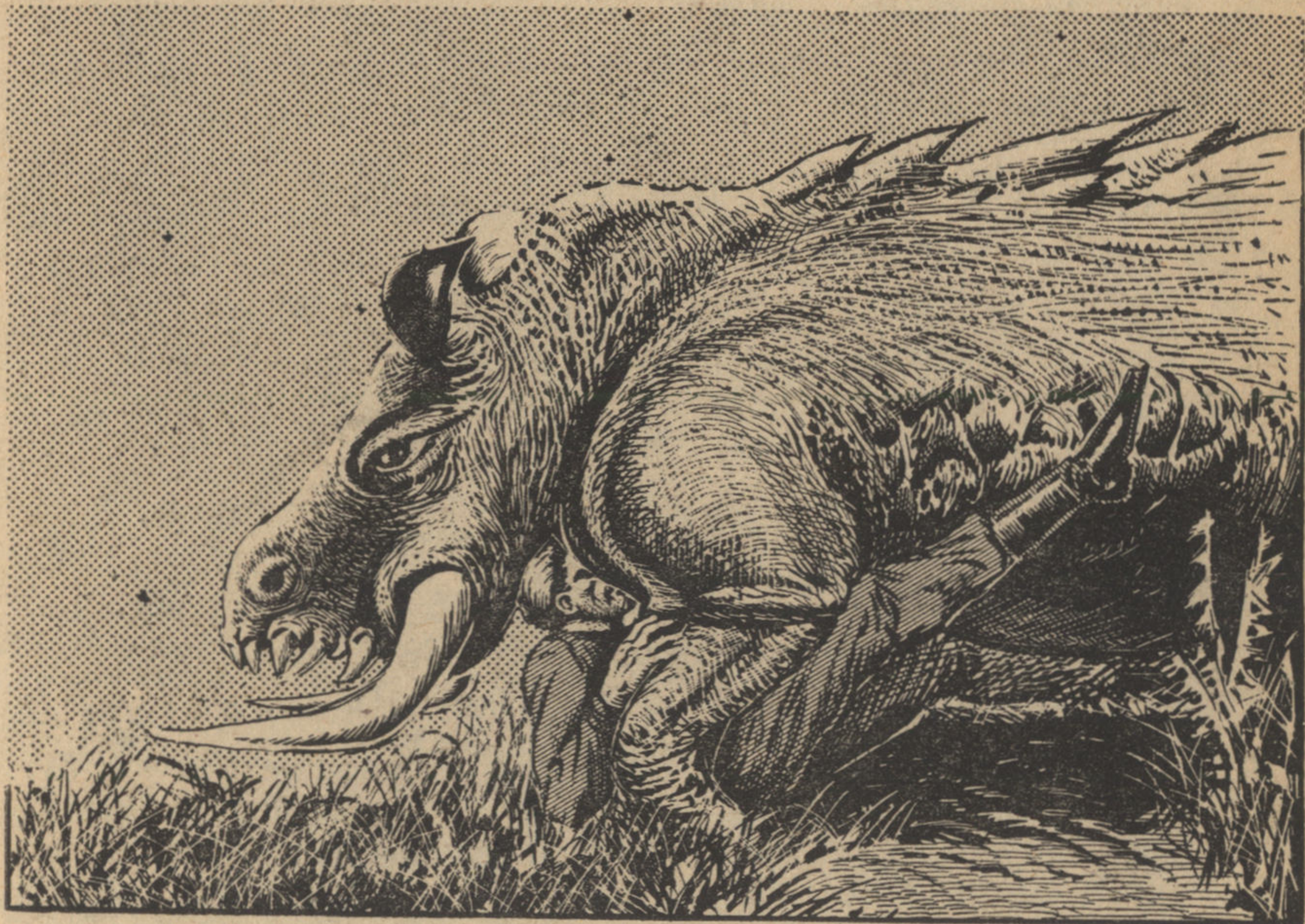
TESTING



Across the surface of an alien world the featureless balloon-shaped creature followed them . . . testing . . .

By **JOHN J. McGUIRE**

Illustrator **ADKINS**



I CANNOT believe that the . . . The Follower . . . was waiting for us.

No, what we did was too unpredictable to have been waited for. What we did was not Standard Operating Procedure.

Our reaction was a spontaneous reaction, built up to by the monotony of the trip—and the

unusual strains of that trip!—, then triggered at critical mass by a girl's laughter.

Marie had laughed, then she had picked up her recording equipment and said that she wanted to permanize her response to her first landing on an alien planet.

The bubbling laughter was like

a contagion, infecting all of them . . . and me. It was a river, washing the Team out of the door, down the ladder, as a group. Then it eddied back through the door for me.

Automatically, I locked the controls before I went to join them.

I remember that Will filled his pipe, was lifting it to his mouth and saying that he had waited a long time for this, a chance to smoke without poisoning the rest of us.

And then. . . .

. . . the moment of blackness, still not fully explained, maybe never to be fully understood . . . the long, long moments of terror, when the seven of us could only huddle together, too stunned to talk . . . panic the master, reason the slave, until. . . .

. . . seven words made us human beings again.

“We had better check our survival kits.”

Doctor Harry Connell speaking, his words the first event to make sense since Marie’s laughter had made nonsense out of SOP for landing on a new planet.

I DISCOVERED myself and Marie in each other’s arms.

And, around us, not what we had left the ship to revel in: the Earth-blue sky, thick Terran-green grass, a yellow sun.

We had found those things for a moment, but we had also found.

. . .

. . . that moment of blackness . . . and then . . . a level expanse of iron-dark sand . . . encircling us, a coruscating web of dancing light . . . and about twenty yards away, the thing we learned to call. . . .

The Follower:

. . . A gigantic, balloon-shaped object floating about thirty feet above the ground . . . no particular color and yet a melting blue that blended with the sky . . . featureless, except for long tentacles dangling down and glancing off blue sparks where they touched the ground . . . featureless, but I felt it was somehow watching me. . . .

We had landed—as pilot, I had noted our touchdown time—less than ten minutes ago.

The panic, those moments of horror and surprise and less-than-human response, are still part of my dreams.

But now Connell was trying to make his Rating Team function as they had been trained.

Looking around he amplified his previous order. “Separate within the limits of this . . . this fence . . . to make the check.”

I started to laugh inwardly. His order was ridiculous: if that object floating over there had the power to move us as a group from

our jump-ship to . . . wherever we were . . . it was obviously too powerful to be balked by the simple gesture of us putting all the space available between ourselves.

But we obeyed, and in the act of obedience I found maybe the real reason for the order. With each step I got back a little more self control.

I was thankful, when I halted a few feet from that web of dancing light, that I had not neglected one SOP. As pilot, one of my duties had been to make sure that everyone had donned a survival uniform and kit before I attempted the landing.

And our stupid mistake of leaving the ship had been a quick mistake, without a pause to remove the kits.

I OPENED my pack with fumbling fingers, ignored everything else to grab for the ship-finder. I held it in my hand to estimate the distance to the jumper from the way the needle swung.

My heart did an extra skip and flip: the needle would not home precisely.

We were a long, long way from where we should be!

I strapped the finder to my wrist, knowing that the rest would see what I saw and wondering if they would feel as I felt. Then I fastened the tiny pis-

tol with its charge of proton packages across my belly, tried once, found I could reach it quickly.

Pellets of compressed food enriched with the necessary vitamins. Biotics and anti-biotics. The small changer that would allow me, at the rate of about a cupful an hour, to get safe drinking water from almost any combination of air and liquid or solid. The charged knife, on safety, in its sheath. The bi-nocs. The ato-flash. The plasti-rope. The gloves.

And, of course, the ultimate answer, the ring which I slipped on my finger: meant for that moment, if it should arrive, when death would be preferable to continued life.

My kit was complete.

I turned to look at the others, my passengers, the six members of the Rating Team.

I had delivered, picked up, both Safety Teams and Rating Teams on their planets before and, until this time, they had been just that: a delivery or a pick-up job.

But this was different and I looked them over in a way that I hadn't on Terra, and on the way to the planet. I thought of the way the ship-finder needle had swung: *We may be together a long, long time!*

Doctor Harry Connell, the Team Leader, standing in the center of our rough circle, look-

ing around with repressed impatience.

He was one of those rare ones the University turns out not-often-enough, the scientific *non-specialist*. He knew a little bit about everything, was innately curious about everything, the perfect man for the job of bringing the findings of the group into focus. He would write the report on which the big decision—to colonize or not to colonize—would be based.

He stood in the center of the area, a big, broad-shouldered man, accustomed to responsibility, but right now, sweating as I had before my first jump.

As I shifted my gaze to the others, Doctor Connell started to talk.

“Let me summarize our situation. How and why we are here, we do not know, although we can assume that the . . . object . . . in the sky behind me had something to do with this transformation.

“*Where* we are is again something we do not know, but we again can make an assumption. We are on the same planet as our ship, or so the ship-finders tell us.

“We’ve got to begin with something, so let’s begin with this fact, that we are *some place* on the same planet we landed on.

“The planet was checked by a Safety Team. Their report stated

that the planet was suitable for a complete Rating.

“Of course they found some dangerous life forms here. But they found nothing, repeat *nothing*, that could not be handled by reasonable precautions and ordinary weapons.”

He paused, then went on in a voice he tried to keep neutral; “All of us knew that report and that could be why we left the ship so carelessly. Before I go on are there any comments?”

Comments?

What was there to say, except that for the first time a Safety Team had goofed and had overlooked the really dominant life form on a planet?

Safety Team clearance had always been enough for me before. Those boys earn their pay with the highest percentage of casualties in any of our branches. I had always believed that when they said a planet was safe, it was *safe*.

Yet I looked at that featureless object floating in the air, let my ears fill with the odd sound made by its tapering, bristling, knotted appendages and I had to admit to myself that: *they couldn’t have missed that thing!*

AS I was beginning to trace that extra filip of terror to its source, Will Franklin, our biologist, spoke up, voiced a version of my thoughts.

"That thing over there is not native to this planet. I know the general nature of life here, the mainstream course of evolution on this planet.

"That thing could not have evolved out of any life on this world."

And now, with my thoughts put into words, I wasn't half as scared.

Funny the way our minds work. Maybe I should have been more frightened. After all, in over a hundred years of work, the Bureau of Planetary Exploration, Preparation and Development had never before met any life form alien to the planet on which it had been found.

But there had to be a first time.

Then the implications began to sink in: another race able to travel among the planets, among the stars. . . .

"But why? Why?"

The voice was my own, hoarse and strained. I was grabbing for something, *anything*, that I could understand.

"I would assume," and Marie's soft tones came clearly across the distance between us, "that we are in a testing situation."

"I agree," from Will Franklin. "It's like what we've done in the lab countless times: picked up the animal from the place that it knows, put it down somewhere

it's never been, just to see if it can find its way back.

"And add, the being doing the testing has far greater powers than the one being tested."

I GLANCED down at my shipfinder, noting once more how its needle would not fix to a definite point on the far-distant horizon.

Greater power than we possess? That's putting it mild, Will, very, very mild!

Then I realized what Franklin was agreeing with, what I too had accepted and I was suddenly empty inside. Empty except for the words, *being tested*, echoing like thunder.

"I wonder if that damned thing was looking for planets to colonize, too."

I found myself unable to understand these people.

The man speaking had been Doctor Robert Ogonowski, radiations expert. He was another big man, taller even than Connell and as flaringly brilliant in his specialty. He was also a red-head, with a matching red beard he had grown on the trip out here.

A jump-ship pilot, by the very nature of his work, is good at fourth-order chess and its time-space complications. But Ogonowski . . . : how do you play a man who is calmly, deliberately, successfully insane?



"Can we pass safely through this . . . whatever it is, fence, net, web . . . around us?"

Connell, his voice no longer strained, his thinking direct, to the point.

He was looking at Ogonowski and Eischen.

Both turned their backs to the group, both leaned forward.

I was closest to Ogonowski, could see him most clearly, squinting at the web, his beard almost touching it.

I turned to take a closer look, too.

"Get back, Weston!" Connell's harsh voice compelled obedience.

I stepped back, with a flash of

wonder at his sternness, then forgot it as Eischen spoke.

"How can we tell if it is safe or deadly? At least, how can we tell with only the contents of a survival kit? We've no Terran life form to try on it, no instruments, nothing!"

"But we do, Carl."

Ogonowski pulled his beard away from the dancing web, straightened up.

"We have ourselves."

He stepped forward . . . never completed the stride.

The fence around us was gone, as if it had never been there.

But Ogonowski was dead.

Epitaph, by Connell: "And

now we also know, that thing can kill us.”

II

WE did not bury him. Standard Operating Procedure for a new planet: *do not leave human bodies lying around for anyone, anything, to examine.*

We divided the contents of his survival kit among the six of us, then Connell did a quick job with a couple of proton charges from his pistol and resolved the body to its individual atoms.

Then we looked ahead.

That way the ship-finders pointed.

But they wavered and wobbled, stuttering the meaning of “that way” as a very long way.

The desert-plain on which we stood was long and narrow, surrounded by mountains. We were near one end of that barren box, but the needles pointed the other way, down the full length of the desert toward towering alps barely visible in the distance.

I whistled softly when I looked at those peaks. They were star-touching, gleaming with white on top and very, very far away.

In a moment Connell was beside me. He called the others and without any more comment we started toward those peaks.

We didn't speak about it, but

all along I know that all of us were conscious of that featureless globe, rasping its tentacles against the ground only twenty yards away.

I found no change any time that I looked there.

The big balloon continued to float where it had been all this time, with the ends of its tentacles glancing off those oddly-disturbing blue sparks.

None of us said it, but I'm sure the same question was in every mind: *would the thing allow us to leave?*

Connell had turned from me to set up the order of march.

TOM Laurent, Marie's twin brother, was to range out in front of us as a scout. Connell would be next. Marie and I would walk together. Franklin would follow us, maintaining the same distance behind Marie and me that Connell would in front of us. Eischen would be the rear guard.

I started to object. I felt that I was being pampered, protected.

Eischen was ahead of me. He also began to protest. From the spaceport he had been part-father, had tried to be full-time lover, with Marie.

“Don't be a pair of fools!” Connell snapped, before we got out more than a couple of words. “Let's face facts.

“Item, Weston: you're not trained for this work, we are.

"Item, for both of you, for everyone: while naturally we want to take care of Marie, all of you must understand that she can be sacrificed to save Weston."

I felt, probably looked, blank, then I started to understand.

"Yes," the Team Leader said, as if reading my thoughts, talking to me and looking at the others, "if—*when!*—we do get back to the space-ship, you've got to be with us.

"What good is the jumper without a pilot?"

"You are the only one who can get us back to Earth with this story."

I tried to remind him that another ship would come to pick them up at the end of their tour of duty . . . maybe even before then, when I didn't return to Base. But he brushed that aside by drily reminding me that neither of us was due back there for a long time, no one would worry for at least two years.

I considered his thinking . . .
. . . *first contact with an alien being that undoubtedly had space-flight, and—maybe—star-flight . . .*

Yes, a story that had to get back to Terra.

Tom started tentatively, his first few steps hesitant; and so with the rest of us, each stride with a glance over the shoulder.

But the big balloon did nothing to stop us.

Instead, after we were well-started—all of us turned at the same time, alerted by a change in the crackle and rasp—it began to follow us.

It did not seem to intend interference, merely moved up to the same distance it had held while we were in the web.

"I *know* we are being tested," Marie said to me.

I began to understand how a guinea pig might feel.

We kept on going . . . and no one looked back at the darker spot on the iron-dark sands.

For the next few days, those words, the action they stood for, became the most important fact in our lives:

. . . we kept on going . . .

We were moving across an iron-dark desert without a single shrub or blade of grass anywhere on its unchanging surface.

And we had forgotten just how hot a Terran-type sun can get.

Or, to keep the record straight, that was something I had never known.

OF course it hit me worst. The people I was with were trained Planet Raters, physically conditioned for their work. Mentally conditioned, too.

Take water, for instance.

I couldn't get enough.

Connell warned me twice, then shrugged and stopped talking. He figured, as he told me later,

that when my changer burned out, we still had Ogonowski's in reserve.

I made the adjustment that gave me water from the air and a little of the sand before the end of the first two hours and I began keeping the changer in constant use. I knew I was burning it up, but I was on fire too and I had to have water.

The first day we travelled well. Weariness from moving through the constant heat had not yet accumulated and we made excellent progress, though of course the distance we covered couldn't be noted by any greater fixity of the ship-finder needles.

But we were not moving as briskly at the end of the day as we had at the beginning. The narrow valley reflected the sun's rays and held their warmth like an oven. By the end of the day we all welcomed nightfall. Even then the heat lingered until late, perhaps until what would have been midnight on Terra. We settled down to a restless night.

The second day our torment started.

There was no shade, no shadows but our own. Halfway through the day I tentatively suggested to Connell that we travel by night and rest by day. I knew the obvious answer before he croaked out the words:

we would never be able to sleep in that sun. It was better to move through the heat and get what rest we could in the comparative coolness of the night.

We kept on going.

On the fourth day I began to feel persecuted by that damned thing following us.

It stayed the same distance away, remained a huge, blank globe that changed only as the blue of the sky changed.

But, more than anyone else, I was constantly aware of it. The crackling sound that it made as it trailed along behind us began to get on my nerves the way the sounds of the stars never had.

Those sounds I knew. The radio noises of the stars are individual sounds, coded on charts and used by jumpship pilots as a guide. They are friendly sounds.

But this crackling was alien to my knowledge and torture to my ears.

THE seventh day I broke under the torment.

I remember turning, screaming, whipping out my pistol to begin shooting.

"Grab him!" Franklin yelled.

He was directly behind me, could see what I had turned to do, but he was too far away to stop me.

Marie was nearer and, as we were to learn so sadly later, she

saved my life. She left her feet in a flying leap that ended with her arms wrapped around mine and both of us sprawled on the sand.

Before I could push her off and scramble to my feet—she was strong, but I was wild—Franklin was there, taking my pistol, helping to hold me down.

Then Connell was also there, kneeling beside me, learning what had happened.

I remember some of the conversation.

Franklin's voice: "We can't take a chance with him. Might have destroyed all of us with what he tried to do."

Connell's: "I know."

Franklin's: "You're the doctor, you know what to do."

Connell's: "I hate to do it. He'll be a zombie and we may need everyone, completely alert."

Marie's: "I'll take care of him."

Eischen's: "You have, more than he deserves."

Franklin's: "Knock off the jealousy, Carl. Remember Weston is our pilot and we need him to get back to Earth."

Probably Connell nodded then, because I felt a burning in my palm—the way they had to hold me down, they couldn't pull back the survival suit to shoot me in the arm.

The burning spread all over my body. Then, after a few moments, it died away.

And all the world was wonderful.

I know I must have been smiling, I remember hearing myself laugh.

I sat up. I sprang to my feet.

The lone and level sands around me were of a sudden the most beautiful sight that I had ever seen.

I wanted to go walking across those sands, to see more and more of their unique loveliness.

I wondered why we had stopped, I became childishly angry at the fact we had halted.

"Let's keep on going," I said, and I recall speaking eagerly, demandingly.

We did.

FROM my own direct knowledge, I cannot tell much of what the next days were like. They kept me under sedation and so I lived in a world of ever-changing glory.

Since then, I have learned more from the tapes.

Marie, the official recorder, each night made a brief report on the events of the day. I have listened to those reports many times and each time I have marvelled at that Team.

Shepherding a virtually mindless idiot, they walked the length of that desert. Guided by one thought . . . *just to keep on going* . . . they managed to surpass the limit of human endurance.

They were never so exhausted that they failed to record the observations for the day. The voices are labored whispers or husky, choked gasps; but each voice, each person, is there.

Marie is heard most often, of course, although many times she says merely, "Nothing to add to previous reports."

Connell's voice is naturally the next most frequent. The non-specialist, by the very nature of his work, has more to consider and report.

Eischen reports once for Tom and twice, on successive nights, for Marie. The report he gives for Tom concerns the enormous mineral potential of the desert and is made with the Dutch-uncle attitude he had adopted toward the young geologist. When he speaks for Marie, it is with a deep concern more intense than that of a Dutch-uncle. Franklin is there only once, understandably: the only thing biological to record was the total absence of any life on the iron-dark sands.

AT last, even to my dulled mind, a fact began to penetrate.

The desert was no longer flat. We were going up and down little mounds that got higher and higher . . . till they were little hills; and gradually, bigger hills. There was shade and shadow to be found now on the slopes away

from the sun. The days were not so hot, or at least they did not seem so. The nights were definitely cooler.

On a portion of one tape is a summary of the discussion concerning the wisdom of daytime travel. The original decision is confirmed: the coolness of late night is negated by its total blackness and the impossibility of sleeping by day.

When they came to the trickle of water, they brought me out from under the drug.

My first real memory of the coming-out is the feel of water rippling across my bare feet. Then I became aware of Franklin on my left and Connell on my right.

Suddenly I was shaking.

"Drink this!"

Connell, forcing a cup of bitter liquid on me.

The bitterness became a warmth going down my throat, a warmth that I could feel in my stomach, then slowly spreading through my body.

I stopped trembling. I could lift my head and I looked around.

I was looking at five objects that resembled skeletons more than they did people . . . faces eroded to the bone, scorched black, so much alike that at first I could not find Marie's.

All of them were smiling.

"What happened? Where are we?"

Connell ignored my first question, answered the second. "In the foot-hills of those mountains you saw."

"What happened?" I repeated.

"You went through an experience that all of us go through in this work. The strange environment got you and we had to keep you under exhilo-drug."

I looked at my hands. They were still trembling slightly, but that warmth was beginning to reach the finger-tips.

I pulled on my boots and moved apart from the others for a moment, to the top of the little mound behind us. It wasn't very high, but it was high enough. I could look back across the desert, all the way back to where the iron-dark sands met the horizon.

There was no wind, there never was any except a slow stirring of the air at dawn and night-fall. The paths we had made were clear and easy to read, would probably remain that way in the unmoving sand for unnumbered years to come.

I realized there was no sense in looking back, so I looked ahead.

The mountains seemed near enough to touch.

III

WE followed the trickle of water to its source in the mountains.

We did that for two reasons. First, we saved our changers for later use, other needs.

Second, the little stream took the easiest course among the hills and we wanted to rebuild and save our strength for what lay ahead.

There could be no doubt that another ordeal lay ahead. The closer we got to those soaring peaks, the higher they loomed. The snow-covered slopes started looking steeper and steeper.

The days grew chilly, the nights were very cold.

There was no vegetation of any sort, nothing at all which we could burn.

The little pistols were our only source of extra heat. They were made so that a single charge could be reversed into the butt of the gun and, until exhausted, the charge would radiate a small amount of very welcome heat. Tucked under the survival uniform, the warmth would gradually spread and cut the cold by a slight degree.

The patches of snow became more and more frequent. Then almost overnight they were no longer mere patches; they were an endless field of white stretching upward to the sky.

Franklin wondered most about it, Connell worried most about it: we found no plants, nor any sign of animal life.

Will regarded the matter as a

professional problem, one that classically illustrated the interdependence of plant life, animal life and climatic environment. But he was utterly baffled by the absence of even a rudimentary lichen-type of flora.

Connell simply wanted food, something to supplement our supply of capsule rations.

"We've got to find some additional source of food," the Team Leader kept repeating. "We'll need to eat more and more the longer we're in these mountains."

But there was no food to be found.

At first we found the climbing easy.

However, after a while, we began to face problems. Which was the best way forward? Which would be the easiest way upward?

Tom had done a lot of mountain climbing while learning his geology. Eischen had done even more climbing as a hobby and on mountains other than those of Earth. But even with those two experts picking the route, we often chose wrongly, were forced to retrace our steps and find another way up.

Finally we faced solid walls of ice.

In front of that first wall we began to realize how high we had come. Breathing became diffi-

cult. We were forced to move at a much slower pace, to rest more often.

We could not straggle in this desert of ice as we had on the desert of sand. Long ago we had pulled on the metallic gloves and now we fastened ourselves together with the plasti-line.

Tom and Carl would work out our course and Tom would lead the way, cutting steps for us with his charged knife or his pistol. We would also use our knives—they drove easily, deeply, into the ice—to enlarge the steps or to brace ourselves into place.

Sometimes our progress seemed measureable only in inches.

Going down the other side of a wall was the same procedure in reverse, but at no greater speed. Carl and Tom, whose relationship had changed from uncle-nephew to not-quite brothers, would plot the descent and again Tom would go first.

I no longer laughed when I looked at the barrel-like Eischen. As anchor-man for our descents, his weight and strength were our preservation.

Instead, I envied him for every move he made emphasized the fact that I was still the most useless, pampered member of the Team.

We became fairly skilled as a climbing group in a hurry. But Connell, with constant admoni-

tions, occasional snarled words and continual example, never let us become careless.

THE sun, not too long ago our greatest enemy, was now a sought-after friend.

The nights were now what the days had been, our hours of greatest misery. We dared not try to move through the darkness—the gleam of an ato-flash was too short-ranging—and we dared not even try to sleep lest we never awaken. A short lying-down on the marble-hard snow and ice, then up and moving about; or, most often, simply huddling together, trying to endure without comment . . . those were our nights.

And . . .

. . . still the same distance behind us, but now more often a shimmering white than a copy of the blues of the sky . . .

. . . The Follower, apparently no more aware of the cold than it had seemed aware of the heat.

Pure chance saved our lives.

We were following one narrow defile, hoping that it led beyond the mountains towering above us on all sides.

For the moment, we weren't roped together and so Tom was way up ahead.

We heard him shout, a glad shout, and all of us began running forward. Twice we made a group-tumble in the snow: the

defile was so narrow that when one of us stumbled, the rest of us fell over him.

The winding way abruptly ended in a small glen. We could see Tom, could see where he was pointing, could share his joy.

A cave . . . with water flowing from it . . . *and steam arising from the surface of the water!*

Weak and cold, but how we ran!

We didn't talk, just gabbled at each other, as we stood beside Tom, added our lights to his and craned our necks and pushed each other to see inside the cave.

Far, far back, almost beyond the range of our ato-flashes, a spring bubbled up and hot water rolled from it toward us. A mist made the whole cave foggy, dripping with moisture, but warm, warm, *warm*.

I was frantic with eagerness to get into that water, but Tom and Connell blocked the way.

I listened to them.

“. . . result of some deep-down volcanic action,” Tom was saying. “I'd better check for gasses,” with a long sniff, “but I don't get anything here.”

Connell too was sniffing. “Neither do I, but you'd better go the whole way in, slowly.”

Tom walked cautiously back to the spring, breathing so deliberately that each inhale-exhale was clearly audible to us at the entrance.

"I'd say it's safe all the way," and his voice echoed back to us oddly.

I blurted out my one thought, "I want a bath!"

"Dream of heaven," breathed Marie.

"We'll wait at the entrance," Connell told her.

WE sat with our backs to the hot, gurgling water, listening and—for me, at least, probably the rest of them too—envying the splashing we could hear.

It wasn't long before she finished and we could indulge ourselves. The hot waters from the spring made the cave warm, our flashes lit it brightly.

I have never undressed any faster, never dove into an water more gleefully.

We decided to stay where we were for the remainder of the day and for the night.

It was a wise decision. The long rest, the bath, the two extra food capsules and the warmth that allowed us uninterrupted sleep, all combined to refresh our bodies.

And . . . to renew . . . our souls.

THE next morning we continued to follow the defile. It had led to our greatest good fortune so far.

Our luck stayed with us. The defile gradually broadened and became a pass through the

mountains. We didn't have to do any more climbing up or down, there was never again a need to rope ourselves together.

At last even Connell agreed that the mountains had retreated far enough to each side so that we could say we were travelling through a small valley.

Of course Tom was again the first to see it and as before he announced his discovery with excited shouts. We could see him running and waving for us to run forward too.

Connell then added a loud yell, but it reached our ears only as a noise, not words. We could tell he was happy, but we couldn't tell the reason for his happiness. Then he too disappeared, running full speed, around the mountain-angle hiding Tom and his discovery.

We ran to be with them. We could guess the reason for their joy when we were only part-way round the jutting spur.

And . . . *the sight was the one we had waited for: we were through the mountains!*

Ahead of us, the range was now a series of descending foothills, which we could assume ended in a plain: far, far out on the horizon the binocs could catch a hint of flatness and of green.

On a hunch, I pushed my glove forward and my sleeve backward, looked at my ship-finder.

For the first time since our long walk had begun, the needle pointed fixedly in one direction: a little to the left of our present course, but unchanging on that line.

And now I was like Tom and Connell, too excited to shout recognizable words. I could just yell hoarsely and point to my wrist.

The rest of them looked too and suddenly there were no words, no sounds at all. Their finders agreed with mine.

AFTER a moment of simply staring across the distance, we exchanged quiet congratulations. Then we began a traveler's study of what lay ahead.

Way down the slope I could see some black specks moving and I pointed them out to Franklin.

Will squinted at them, then started moving around over the snow. He bent over, knelt to peer closely, then stood up with something in his hand.

"A sort of lichen," he said, "chewed right down to the snow. Let's see, and his eyes narrowed as if he were reading the fine print in the footnotes of a book. "Plant life on this side of the mountains . . . sure, got it. I'll bet that those things down there are the kind of mountain goat that the Safety Team reported finding.

"But from what they wrote, I

didn't expect to find them this . . . Well, that's what we're here for, to correct their mistakes."

Maybe that's why you're here, I thought dourly, with a glance over my shoulder, at the now-white sphere, floating nearer and nearer, coming to less than twenty yards away. But you can be damn sure that I'm here for another reason.

Tom and Carl were in their usual huddle, picking our way forward. The older physicist now gave the young geologist a slap on the shoulder . . . and I winced.





EDKINS.

The two of them had grown very close together; not like a father-son team, but more like one man about to marry the other man's sister, an attitude I could not like.

Tom started down the mountain, went about ten yards, turned and called back to Will, "Are those things—those goats—edible? If they are, I'll head that way. I could sure use a change of diet."

He never said anything else.

What looked like a large, flat cake of snow leaped from the rock beside him.

I had an instant's impression of claws, a fanged mouth, and a body of incredible thinness.

Then Tom was down, hidden under that fanged cake of snow. I couldn't see his arms, but his feet threshed wildly.

We weren't in march-order yet, so I happened to be nearest and I was first beside him. My knife slashed widely, but not too deeply. That impression of incredible thinness was strong and I feared slashing through to Tom.

Then the thing was off Tom, was moving backward more quickly than I could move forward. It stopped, reared up, the top of it one gigantic mouth.

I went after it with only my knife, but my thumb was holding the switch so that the full charge was in the blade. As it

lunged at me, blindingly fast, I was glad it was me there in front of it, for none of the others could have met that speed.

But I did, slashing from left to right, severing the thing in half with the stroke.

It was not immediately dead. For a long moment both halves continued to twitch. Then they were still.

I turned back to Tom, only to see that all I had done had been to avenge him, not save him.

I just . . . stood there numbly, trying to understand. The others remained still and silent.

WILL Franklin walked past me and bent over to look closely at what I had killed.

"A snow-flat," I heard him say. Then, deeper-toned, self-accusing, "I should have remembered and said something about there being dangers now."

Marie had not yet time to weep.

Carl Eischen seemed to go a little mad. Stepping away from the body of the young man who had become his friend, he walked apart from the rest of us, then turned, lifted his fist, shook it at The Follower, shouted, "You! You did this! You killed him!"

"Let's see how *you* like death!"

He began running toward the big balloon and it was near, he didn't have far to go. I saw his pistol lift in his hand. I could see

faint flickers and sparks close to the surface of the big sphere and I knew Eischen was shooting.

I saw what could have happened to me.

That web, that dancing fence of light which once had enclosed all of us, was suddenly around Eischen.

Like Ogonowski, he did not complete the step he started as the fence enclosed him.

He slumped to the snow in mid-stride.

IV

WE had the duty of two cremations, not one.

Afterward, we divided the contents of their survival kits among us and started down the first slope, into the first valley on the next lap of our return.

Four, who had been seven.

And . . . behind us, but nearer, far closer than before . . . the rasp and crackle of Old Faithful.

Although the descents and climbs on this side of the mountains were far less difficult than on the other side, we roped ourselves together again. In addition to the normal hazards of climbing, for the first time we met *changing* weather.

Up till now it had been either too hot or too cold. Now the weather could change within the day and within the hour.

This made everything trick-

ier. Without warning we would find ourselves wrapped in fog or slapped with snow and rain. The snow underfoot was treacherous. Without observable reason or advance cautioning, an avalanche would thunder down a hill. The ice was no longer cold marble, but rotten with hidden soft spots.

Connell and Franklin discussed the climate-change constantly. They tentatively concluded that the differences between the two sides of the range—the vegetation, the animal life, the nature of the snow and ice—all of these were due to a prevailing set of winds that would demand thorough study.

They so dictated to Marie and that tape is also a part of our record.

For my part, I know only that we travelled with the wind always in our faces.

THE air grew warm rapidly, far faster than the chill had mounted on the other side. Signs of animal life, the animal life itself, vegetation upon which the animals could feed, all grew more commonplace.

The signs multiplied geometrically. Will's nightly reports got longer and I noticed that Connell listened to the reports with great attentiveness.

I could guess what was in his mind. Dividing the concentrates

that Tom and Carl had carried had eased his worry about our food supply, at least vocally. But I felt sure that he was looking ahead, wondering how to supplement them now and so have a reserve for the possible time when we would have nothing else.

I could also guess why he seemed reluctant to bring up the matter: I too remembered Tom's last words.

However, about two weeks after we had started down from the pass, during the mid-morning halt, he and Will—they must have planned the approach beforehand—drew Marie into a discussion of the Safety Team report.

Looking back, I think they were also trying to draw her out of the dark mood which had depressed all of us.

Will stated the facts, that the Safety Team had *sampled* the planet's life forms; had tested twenty, thirty, different species out of the hundreds to be found. Those tested could be eaten without danger. The Safety Team had generalized on those samples—they based their sampling on the evolutionary scale and so gave themselves high probability—into the statement that the plant and animal life were probably safe for human use.

I sat listening, only half-paying attention. Then the meaning of their discussion hit me.

Their topic was *not* whether or not to use the menu available locally.

The question was, *who* was going to try it.

All three of them trying the food, they agreed, would give the most accurate results. However, if possibility ruled instead of probability, all three of them might die and I would be left alone.

Even with a good supply of concentrates, how long could a jump-ship pilot like me last, alone on an alien planet?

Therefore, two of them would be the guinea pigs.

Problem: which two were easiest spared?

Phrased that way, there was no question who was best-equipped to guide me.

WE had stopped to rest on an almost snowless slope, and not far from where we sat was a growth of stunted, bush-like plants.

Connell remained with me, to gather the vegetation, build a spit and start a fire.

Marie and Will went off together, to hunt the meat.

The Follower remained with Connell and me, hovering closer now, as it had since the affair at the pass.

Marie and Will were gone only half an hour, returning then with a four-legged, pig-type ani-

mal slung across Will's wiry shoulders.

Marie took over the fire which Connell and I had built up. She re-arranged the spit and eased the fire into glowing goals while the two scientists went about cutting up the animal.

We had decided, before our guinea pigs had their meal, to remain where we were for the night. We had a noon meal, an evening one and a pleasant fire to sleep by.

It could have been pleasant, but it wasn't, especially for me . . . until the next morning, when I could look across the fire and see that Marie and Will were both all right.

The day after the experiment was a memorable one.

Will made another kill before we halted for the night and I enjoyed whatever it was that we ate. Maybe it was the animal's flavor, maybe it was just the difference between swallowing a capsule and sinking my teeth into something solid. After the meal I settled back feeling full for the first time since the spaceship. And I was really ready for the sleep that I hadn't gotten the night before.

But Will wasn't ready for sleep and he kicked off the topic for discussion.

"We were too scared inside the fence, too hot and tired on the desert and too cold in the

mountains," he began. "But I can't think of any excuse now. It's time—past time!—that we get down on one of Marie's tapes all we know or can guess about that thing."

Will gestured over his shoulder and all of us looked that way, out past the fire into the darkness. The big, round globe was clearly outlined by the star-rich sky.

"Marie, you're our psychologist. Let's start with you," Will challenged.

Marie shook her head, no. "I'd like some biology to base it on, Doctor Franklin."

Connell nodded agreement with Marie and even I could see the point.

Will shrugged, a sort of helpless gesture and most unusual in that intense little man.

"I've said it before, I haven't changed my opinion, just hardened it: I can't fit that obese object into the evolution of life on this planet.

"It is as alien to this planet as we are! And one other item that I want recorded, I can't be sure and I wouldn't swear that the thing following us is alive."

The statement, the flat tones in which it was delivered, stunned me, but not half as much as Connell's words of agreement.

"I know what you're driving at, Will," the Team Leader said. "It could be a type of recording

or observing machine with built-in protective devices. It could be automatic or some entity could be operating it from a distance.

"But what do you base your thinking on?"

"Negative information," the biologist replied. "Negative, but let's get it in: I've never seen it feed."

"Let me be more precise: it doesn't seem to be absorbing energy in any way we can recognize."

"I've made the same observation, but I want to point out the fact can be evaluated many ways," Connel said. "It seems to indicate that the thing may be a machine, but again, any metabolism that object may have could be as unknown to our thinking as the power it controlled when it moved us."

THERE was a silence, as if they were digesting what had been said or preparing new thoughts.

I used the time to analyze my own attitude.

I was jolted to realize that I didn't look at The Follower or think about it because . . . *I did not want to be aware of it!*

This was, I think, the instinct of self-preservation at work. If I would have had awareness of The Follower in the forefront of my consciousness, I would have undoubtedly tried to do again what

I had tried on the desert, what Eischen had tried at the mountain pass.

And with the same result!

So I looked at my companions and I was now completely awake: *they had deliberately studied this thing!*

"Like Will," Marie was saying, "I still believe what I said when we were in the desert. This is a typical testing situation."

"This . . . object . . . has presented us with a problem to be solved. It is remaining with us to observe how we are solving that problem, and how we are solving all the little problems that arise from the main one."

"Observing . . ." Will said thoughtfully. "Yes, it's doing just that, apparently. But that doesn't help answer the question, is it a machine observing us or . . . something living?"

"No, it doesn't," Marie agreed, "nor does my next point, either."

She paused, and by her expression dark memories preceed her next comment. "You will have noticed it makes no attempt to interfere, either to help or hurt. It simply follows us."

"And, can you give any other reason for this following except to observe?"

"A corollary of observation could be intelligence," Connell said, "but about that helping or hurting, don't forget: it killed Eischen."

"I would say in that case, the being acted or was made to act, in pure self-defense," Marie interpreted.

Both Connell and Will were looking at Marie with a curious respect, appreciating what it cost her to be impartial.

Hating to contradict her, but led by that example of being factual, I chipped in here. "It didn't seem to be in any danger to me. Those proton charges were disintegrating before they touched that thing."

WILL turned and stared at me. "Good eyes, Jim, let's use them more often. I admit that I hadn't noticed that.

"After all, we've no way of knowing, *and maybe it doesn't either*, what those charges might have done."

Connell had a question for me: "Jim, how does that thing stay in the air?"

I had to laugh. "Doctor, I haven't the least idea! I can only say what all of you have seen, that there's nothing openly mechanical involved. Beyond that, your guess is as good as mine, maybe even better.

However, remember this: someone on the outside can't see anything happening when a jump-ship lands on its gravity-sensors."

I must have gotten an odd expression on my face: Connell

started to speak, then said, "More, Jim?"

"I don't know if this belongs here—I guess maybe it doesn't—but I want it on record," I said slowly. "It seems to me, instead of us getting back to the ship, there should be some way to get the ship to us. Scouts could use that, Safety Teams could, and well . . . look at us. Of course, something like this might never happen again, but I want that idea in the record."

"Can it be done, Jim?" Will asked.

"Oh, yes," and I was speaking confidently, for this was my business. "I don't mean right away, it'll take a lot of fooling around. But it would be an extension of the ship-finder principle . . ." I stopped talking as I began figuring circuits. Suddenly, I remembered something else, something implied in what Will had said, something that should be spelled out, and I added "If this thing is not native to this planet, then it's got space-travel, some kind of drive on some kind of ship . . ."

I LEANED back from the fire and, as my head tilted a little, the round bulk of The Follower loomed between me and the stars.

My mouth dropped open. Close as I was by the fire, I was suddenly cold all over, then frozen clear through.

I had abruptly realized something the Team couldn't have thought of, for they were experts on the ground, not on the star-ways.

But this came into *my* specialty, I was using *my* knowledge, an idea that came because I was thinking about jump-ships and space-travel:

THAT DAMNED THING DIDN'T NEED A SPACE-SHIP. IT WAS ONE, AN UNSHIELDED JUMPER.

My thoughts raced, reached conclusions leaped to without connecting bridges . . . *an unshielded jumper could have moved us, as The Follower had moved us, by merely encompassing us in its field . . . our lapses in judgment: any neural response was affected too close to the break-through force of an asimov and The Follower was always close to us . . . and that fence, that web of dancing light . . . that fence . . .*

No, I didn't have all the answers yet, but I was on the way. I needed to think more about it. Should I tell the others what I had been thinking?

They hadn't seemed to pay much attention to the fact that, for the first time, I was contributing my ideas about the situation. Marie and Will apparently decided that they had nothing to add and were off trying to find a comfortable spot of ground on which to spend the night. Con-

nell, on first-guard shift, was pacing the perimeter outlined by the fire-glow.

I sat by the fire for a long time before choosing a place to lie down. But even with a warm fire and a full belly, I couldn't sleep and I saw every changing of the guard. The implications and extensions of my idea kept me awake all that night and many later ones, too:

THAT DAMNED THING DOESN'T NEED A JUMPER!

I wanted to think that idea through, so I kept it to myself. . . . a lapse, an error in judgment . . . ?

I've often wondered.

V

THE next morning, during our breakfast on the pig-like meat, Connell briefly discussed some group matters.

He began by admitting that he had not expected anyone to get as far as we had gotten. He also admitted to carelessness since we had left the pass.

When we hadn't been roped together, we had maintained an irregular sort of formation, with Will usually in advance of the group, out of sight, and Connell bringing up the rear.

This would continue, Connell said, but with this important change: we were to be in constant view of each other.

Next, though there had been some haphazard comments taped off, far too many days had gone by with no report made at all.

No good, the Team Leader said. Every fact we recorded was valuable and had to get back to Terra.

Even mine? I asked.

Especially yours because as an untrained man . . . well, look at it this way: the psychologists will be guided by your ignorance in planning what they should teach the planet's settlers.

Connell then turned to Marie and said, "That's why you will have the most important duty—to keep Jim alive. From now on, you stay closer to him than a wife would. Better still, stay as close as a jealous mistress."

I liked *that* idea.

WE started walking again, going as we had begun to go since we had first been able to get a true fix on the location of the jump-ship. We travelled the valleys which led in that general direction, climbed the mountains and hills only when necessary, and then only at low places or the saddles between the ridges.

Despite the fact that our horizon was always just the next swelling of the ground, we were cheerful. Even Marie, most of the time, lost the bleak depression which had quenched her normally good spirits.

I think our cheerfulness came from the fact that we did not regard each next hill as our horizon. For us, the end-of-the-sky was not the mountain looming ahead, but the needle of the shipfinder on our wrists.

We were leading an easier life, too, one with time for amenities. We weren't too exhausted by the monotonous heat to appreciate a comment; we weren't too numb with cold to be able to joke.

Visibility was limited. The weather was warm but wetly warm. The air was filled with a fine mist that was neither fog nor rain, but kissing-kin to both, and the view from one hill-top was never any further than to the next.

However, the vegetation was a beautiful, vivid green. Game was plentiful. We were happy in each other's company.

We made up a good crew.

On several occasions Marie and I had been telling each other that the next hill would be the last one. We had seen and examined the plain from the last really high mountain. Then we had run into a seemingly-endless succession of hills that were all the same height, with each one of them promising to be the last and not one of them keeping the promise.

However, except for our occasional conversations about it, neither Marie nor I really wor-

ried about when the plain would be beneath our feet. We just kept on walking, knowing that one day it would be there.

WE were following a winding valley, one an ever-widening brook had carved. Then we looked ahead and saw that Will had turned out of the valley and mounted a rocky hill.

He sat waiting for us at the top, limber-jointed, comfortably sprawled just as he had been so many times before, holding up until we could watch him go down the other side. He did nothing to indicate anything unusual, so we didn't hurry.

And we of course couldn't look to see why he had come back toward us before going up the hill. In the valley we had been following, Will had ranged rather far ahead of us, apparently far enough to decide to go over the hill instead of continuing along the path the stream had made.

So we just kept our steady stride . . . Sometimes a scramble on hands and knees, because it was a steep, rocky hill, but nothing to get excited about. . . .

. . . until the last few steps, when we were high enough to see over the top, to find ourselves on the last hill and staring down on a grassy plain and hurling ourselves forward, running hand in hand down that last hill to the level plain.

VI

LET'S not be too happy," Franklin advised us, as we sat around the fire that had now become an essential part of each night. "Keep your pistols handy. There are some large and unfriendly beasties on this pleasant-looking field."

"Your area," Connell said. "But you'd better tell us what you know just in case—"

He stopped, obviously wished he hadn't started.

A shadow crossed Marie's face.

"There are some carnivores, of course," Will said, "as you'd expect from the presence of these things," and he pointed to the meat sizzling over the fire.

"They're like those big cats you've seen in the zoos back home, only longer. And," he emphasized, "much faster."

When I asked why we hadn't seen them in the hills, his answer added to my worry.

"Too big. We could eat well there, but those kittens need a lot of food."

I reached down, touched the pistol strapped across my belly, made sure it was loose, easily drawn. And I was very happy that with a proton pistol, no one needs to be a good shot. But I reminded myself to continue the target-practice Marie and I had begun back in the hills.

"And by the way," Will went on, "one of the things the cats enjoy eating is also our other big danger.

"There is a large, herbivorous animal, something like our Ter-ran elephants, roaming the plains. They don't have an extended proboscis, but a sort of shovel jaw. They live in the marshes or near the rivers and travel in herds.

"Now here's the important point about them: *they* won't attack *you*. Not unless you scare them. Then they start stampeding and then they get dangerous: they run right at whatever is scaring them.

"So you have to be careful around their herds. Don't frighten them, watch for their rogues."

"Rogues?" I asked.

"Wild ones. They have a fairly tight pattern of herd behavior and when for any reason one of them misbehaves, he is expelled from the herd.

"The rogues charge anything."

I settled back, still fingering my pistol, and figuring it as the best answer to these odd facts I was learning.

". . . anything else?" Connell was asking.

"No. The rest of the animal life is small, but—" with a smack of his lips—"very edible."

"Isn't that meat done yet, Marie?"

She smiled at him, "In a minute. You're mighty impatient."

"I'm hungry," he corrected her. "Oh, yes, while we're waiting, there is one other thing to watch for and avoid. Just avoid: it can't come after you—"

"How about fire?" Connell wasn't interested in anything that could be simply avoided and later he would damn that disinterest. "Are they afraid of fire?"

"I don't know for sure," Will admitted. "I would say, as a guess, they probably are. I'm assuming that they have knowledge of fire from natural causes."

Connell was mildly disappointed. "I wish we could be sure. Well, we'll just keep a bigger fire going and if they aren't afraid of it, we'll teach 'em to be."

HE started talking about the guard system we had initiated back at the pass after we had found traces of animal life.

"I hope I'm included this time."

"No, Jim, same reason as before, only stronger. We're closer now—too close to take any chances at all.

"You and those tapes Marie is carrying are what we are guarding."

Connell's voice had been quiet but firm. However, I couldn't accept it anymore.

"I can take the first shift and the last," I answered, "which will still leave me in better shape than any of you if something does turn up."

Connell's gaze flickered to Franklin, then to Marie, and back to me. Will shrugged and Marie nodded yes.

The Team Leader gave up.

"Okay, Jim. You put us to bed and get us up," he agreed reluctantly.

IF any part of our long trek could be called pleasant, perhaps the next few weeks would qualify. The weather was good; not too hot by day, not too cold by night.

The going was easy, over land that had just enough swells and dips to make the next look-ahead interesting.

Added to that was Will Franklin, who constantly ranged far ahead of us, doing double duty: picking the easiest way forward and keeping us in the fresh meat that varied our diet. I found that I could relax somewhat during the hours spent alone by the fire during the early part of the evening and the coming of morning. Then I dreamed my dreams and looked into myself. I examined what I knew about me and I found a lot lacking. I discovered myself to be an intensely narrow specialist, good for only one thing: getting other men to their

work. For the most part, I was utterly dependent on what still other men were doing or had done—design my ship, build it, service it. Nowhere was I nearly as self-sufficient a human being as these people shepherding me across an alien world.

A humbling discovery, but once I accepted it, I think I became more of a man and less of a handicap.

The Follower was still with us. However, by now it was so much a constant part of what we were and were doing that, like the inconveniences of a survival suit, we almost ignored it. The rasp and crackle of its movement registered only subconsciously. I believe we would have noticed the sound only if it would have stopped.

Some nights, and some early mornings, though, were a little different. Those were the mornings or those the nights when I explored the extensions of the idea which still chilled me.

. . . that damned thing doesn't need a space ship . . .

More than once I overstayed my time on duty, didn't rouse the next night-shift guard when I should have, let them sleep a little later in the mornings, while I tried to build a picture of a mind that operated like the drive circuits in my jumper, and fitted our occasional errors in thinking

into being too near that power unshielded.

Several times I was next to telling my idea, but I never did. A diffident shyness, born in the belief that I would be an intruder among specialists, held me silent.

The idyl ended when we reached the edge of the first river.

Will waited there for us to come up to him.

Near, not on the bank of the river; he was about a hundred yards from the water itself, looking into the marsh that bordered each bank for a width of about twenty-five yards.

Marie and I both joined in staring when we were beside him. In the marshy edge nearest to us were the largest animals that we had seen so far.

They were long, thick-bodied, with short legs that moved the mud with a squishing sound when they lunged forward, legs that sank deeply into the mud when they stopped. Their heads were small, seemingly just a big mouth. The herd of them coughed and grunted and wheezed as they chomped along, cutting a wide swathe through the tall grass.

Will was squatting on a little knoll about seventy-five yards from the nearest animal. Like them, his jaws were moving too, but he was chomping meat, not grass.

We hunkered down beside him and waited for him to talk.

HE finished the piece he was chewing on, searched his pockets until he found another.

"Might as well rest a while," he said. "Those little stomachs-on-legs gave the Safety Team more trouble than any other life form on the planet.

"Except one," he corrected himself, "and it's not common enough to worry about. I guess that's why they got in that trouble: it's a very rare sort of thing.

Later, even more than Connell, I would damn myself for not asking the obvious question, but I was too intent on what we had in front of us.

"You said they were like elephants," I remarked. "But to me they look more like—like—"

"A Terran hippo," he finished for me. "Yes, they do. But I said elephants because there's other things to consider. The fact that they prefer the marshes, but you don't always find them there. Their herd or group instinct is different, too. Some other stuff, Jim.

"Remind me and I'll start giving you a course in comparative biology."

"And you call them dangerous?"

I couldn't believe it. They reminded me of a long sausage-with-legs, or strangely-shaped

cows, dangerous only to weeds and grass.

"Just start them running, Jim. Remember, they run *toward* a danger, not away from it. And they're so big, there are so many of them, that they just trample any danger out of existence.

"The same thing with the wild ones, the ones that can't be part of the herd any more. They have the same bad habit; they run right at anything they think is a danger and, being crazy, which is why they were kicked out of the herd, to them anything is a danger.

"But the Safety Team said there aren't too many of them. Rogues, I mean."

"So what do we do?" I asked.

"Wait, just wait, till the herd gets by. Then we'll figure some way of getting across the river without getting too wet."

"Doesn't look so deep," I ventured.

"It's not how deep that worries me," Will answered. "I'm more worried about something you would call an eel. They're found in the rivers and they are always very, very hungry."

Connell had joined us from his rear-guard position. After examining the scene and listening to Will's warning, he said, "We'll follow the herd for a while. Down river the marsh gets very narrow where the river makes a bend. The herd should

move across there. If we're careful and quiet, make no move to disturb them, we can wade across behind them. Those eels Will was speaking of . . . they'll also be quiet for a long time after that herd has gone by."

Will nodded agreement.

"And they'll make a path for us through this side of the marsh."

SO we waited and watched and while we sat there, Will talked into the recorder, describing what we saw. And now that I knew something of what to look for, I could watch with more understanding, catching even before Will recorded it the fact that the largest animals surrounded the herd.

They *were* ready to go in *any* direction!

After a while we moved with them, but staying at least a hundred yards away from the river's edge.

I personally moved with extra-special caution: I didn't have the least wish to start those heavy bodies and stumpy legs clumping my way.

At the bend in the river, as Connell had predicted, the herd turned left en masse. All of them crossed the river together.

They must have filled a three-hundred yard stretch of the water with their thick bodies and crunching steps.

I was glad to see that the water was so shallow that it did not reach up beyond the stubby legs.

When they had crossed and started down the other bank, we raced to the river's edge and found the marsh trampled almost solid. We stepped into the water cautiously, then quickly waded to the other bank. Once across, we avoided the cleared space which the herd had trampled and made our way as silently, as rapidly as possible, through the head-high cane-stiff grass.

When we finally stood beyond the last of the marsh growth, we all breathed a sigh of relief. Then we swung into march order. Will took off at a rapid pace to get a good lead, heading right to avoid a long arm of the marsh extending back from the river; Marie and I stayed put; Connell went back a few steps to the edge of the tall grass.

I casually noted that The Follower was both nearer and crackling noisier than it had ever been.

There was a grunt, a wheeze and a snort from the arm of marsh-grass about twenty yards to our left. The tall stems were pushed aside and a shovel-mouth swung back and forth, ended up-pointed at Marie and me.

Then the whole beast was in view, coming at us in a lumbering but rapid charge.

Will never hesitated. Whipping out his pistol, he ran to intercept the monster, firing as he ran. But he must have had the power on low, the way he kept it for hunting, because his blasts did not destroy that hulk, did not even stop its rush until it had smashed into him, crushed him to the ground.

VII

ANOTHER sharing of possessions, another cremation, then Connell led us about a mile from the river and halted.

"Marie, give the tapes to Jim," he said slowly. "Jim, among other things, you are now the official recorder."

Without a word, Marie handed me her equipment.

"You understand, Jim," the Team Leader continued, "that of the three of us . . . well, either Marie or myself must be ready, as Franklin was, to make sure that nothing happens to you."

I understood, bitterly: I had learned to like Will Franklin very much.

"I'll lead, but I won't range ahead as far as Will did at times.

"Marie, you continue to stay beside Jim."

It seemed that with Will's death a portion of our good luck had also left us. The character of the country began to change again. The grass became skimpi-

er, the water harder to find, fresh meat less and less easy to come by, the nightly fires smaller.

We appeared to be moving into a semi-arid region. However, when I asked Doctor Connell for an explanation, he could only shrug and say that until he knew the cycle of winds on this planet, he couldn't answer my question.

The going did remain easy but monotonous. The changing scenery on the other side of the river was replaced by a drab sameness. Each day's march was yesterday's and would be tomorrow's.

Then, just when we seemed ready to stop and stay forever where we were—not from physical weariness, but from that deeper, deadlier weariness of the spirit—we caught sight of a touch of green on the retreating horizon.

We did not reach it the first day we saw it, but we did come up to that vibrantly-green oasis about noon of the following day.

The grove was fairly large, about half a mile in diameter and Doctor Connell was there first, of course. He had not entered the greenness, but stood a little away from where the grass began, staring thoughtfully.

We joined him and I looked at that lush growth with real pleasure. In this land of dirty brown and dusty green, the rough circle of vivid color sparkled like a

true gem. I could see a few of the small, pig-like animals moving in it and even thought I saw one of the shovel-mouths on the far rim. In the center of the grove, I could see a small lake.

I began to think of a long rest with a big fire, fresh meat, and lots of water. My skin began to tingle, anticipating a plunge into that pool.

I asked Connell how safe he thought it would be.

"I don't like it," the Team Leader was muttering.

"Don't like what?"

"That's part of the trouble, I don't know *what* I don't like, I can't tell *why* I feel this way, but . . . I just don't like it."

I looked again and I could see nothing wrong. If anything, this combination of water, firewood and one of those slow-moving animals—fleeting, that thought: how slowly they moved—were an ideal combination that had come at just the right time.

MARIE paid no attention to Connell. Instead, she was already running toward the little lake.

We followed after her, more slowly. We were only a little distance inside the grove when she had reached the pond and knelt to fill her cup.

She half-turned as she knelt, her back was to the pond, and she called to us, "You're both too

slow! I'll have all the tests run before you're here."

Behind her, a long, thin column of water shot up, formed a question-mark that looped itself around her neck and pulled her under before we could take another step or Marie could say another word.

Beneath my feet the ground softened and I began sinking. The trees leaned forward as if they were reaching for us. Another arm of water rose out of the lake and began moving toward us.

What I did without thinking, the pure reaction of rage and despair at the disappearance of Marie, saved Connell and myself.

I pulled out my pistol and the one I had taken from Will's body. I blasted the ground. I shot the trees. I put scars across the surface of the little lake, scars that stayed awhile.

I did not *hear* the grove scream, but I *felt* its howl of agony . . . and I *saw* the ground writhe.

The trees bent away from us.
The . . . water . . . withdrew.
The ground became firm.

We turned and ran from that fair-seeming place.

I was shaking, trembling, ill. Connell was as bad. But finally I could ask, "What was it?"

My question helped him to recover, to answer: "What Will meant, I think, when he said that

we had something to avoid. He met something like it on Dog Star. A sort of symbiosis. An organism, a kind of intelligent virus, in the plants, the ground, the water, those animals you see. Controls all of them, but it can't operate over any great distance."

"You knew about this!"

I had him by the throat.

"Jim!"

ONLY luck, that my rage had been too blinding for a straight strike, helped him break my grip and allowed him to speak.

I dropped my hands.

"Will would have recognized it, Jim; he met something like it when we were with a big team on Dog Star. He told me about it then.

"But here . . . you know we had no chance to really pool our knowledge and work as a Team.

"Maybe I should have known anyhow: this one and the other are a lot alike. They're places that invite you in, then try to keep you there. But—"

"Sorry, Doctor."

He was staring over my shoulder. "Turn around, Jim. Burn what you see on your mind. There may be others along the way. They seed, you know."

I did turn around, but I could not see anything to stay away from and I said so.

"Look closer, Jim, especially

at the animals. Look how slowly they move. They aren't alive, they're just extensions of the organism."

Now I could see it.

Then the follow-up hit me: "What about Marie?"

"We won't be able to cremate her, Jim."

He turned and started walking, beginning a wide circle that would end way on the other side of the grove.

But his answer didn't answer my question.

"What about Marie? *Will she come back like those animals in there?*"

He never did answer me.

He just kept on going.

VIII

AND that's what it had come to, Doctor Connell and I, walking together, practically side by side.

We did more than walk together.

We hunted together. We gathered firewood together. We got no further apart than one of us sleeping while the other kept watch. And we made up for that separation: when neither of us could sleep, which happened often, we talked together, often talking the night away.

The land became drier and drier. A plant like one I had seen in North America, with sharp, prickly spines, replaced the

grass. The deer-like creatures, the pig-and-goat-like ones, were no longer to be found. Small crawling creatures became the only visible life.

As Team Leader, the man on the planet, Connell made the decision about the value of the planet for colonization. Most of the time—in fact, an exception was really a noteworthy event—his word was final.

He reached his decision sometime during this part of our walking together. His nightly reports began pointing out how well this world was adaptable to Terran use.

The reports were tremendously condensed statements, meant for the expert listeners back in the Bureau, and he usually had to elaborate on them for me after those half-mathematical dissertations to the micro-tape.

We never talked about Marie and only once did we talk about The Follower.

CONNELL had made a long report that night. The curiosity about everything which had led him into that most difficult of specialities, *non-specializing*, had been exceptionally wide-ranging, even for his grasp.

Of course, he was also trying to fill in what the missing members of his Team would have reported too.

And I . . . let me be generous

with myself: I wasn't feeling up to par that night.

My own changer had burned out long ago in the desert and that day Ogonowski's had quit. So I had the choice of using Tom's or Will's.

"You're missing the big deal, Doctor. How about a few more notes on that," and I used my thumb over my shoulder.

I spoke bitterly, he answered calmly. "Wish I could, Jim. But I could only repeat the same old words: nothing new has been observed.

"That's something there's no need to say because they'll deduce it back on Terra."

He reached out to rake the coals into a greater brightness. "What's on your mind about it?"

He wore a half-smile when he asked the question, but I don't think of that smile now as I did then. Now I can see that he was encouraging me to talk, as once so long before he and Will had led Marie from her bleak depression.

But then I took his smile as the challenge of the ignorant by the knowing.

I let the dam break, and his smile disappeared; his face was solidly sober by the time I concluded with, "And so I don't think, even if we do get back to the ship that we should also take off.

"We've no certain knowledge

of that thing's powers. But I don't think it needs a jumper. So maybe . . . maybe it can tag along with us . . . *right back to Terra!*"

He closed his eyes for a moment, raked the fire again, then started the recorder, reconsidered, turned it off.

"When did you first think of this, Jim?"

I told him.

"And kept it to yourself all this time?"

He was sitting across the fire from me and his brown eyes were regarding me gravely.

Finally, his long-haired, bearded head nodded approval. He pointed to the recorder. "Put it down right now."

I did and he listened. When I had finished, he was ready with the questions.

"Jim, you're more familiar with this than I am. Is there any way we can protect ourselves against a neuron skip?"

I shook my head decisively. "No, Doctor Connell, definitely not. That takes very special equipment."

He continued probing.

"Jim, that part about an unshielded jumper affecting synapses . . ."

"They'll know what I mean on Earth, Doctor. That's why testing the drive circuit is a very slow job, a very skilled one, and done in armor."

"And you think . . . No, not

Ogonowski: he knew I would have to order someone to step through that fence. He just made the choice easy for me."

I remembered the chess I had played with the big redhead and I was forced to agree.

"Tom . . ." he meditated, then decided, "no. We were just too happy. We were through the mountains, we had read the needles, and we got . . . careless."

For Tom I could hold no brief on either side, could not sit in judgment on Marie's twin. But Carl . . .

"Our Follower was very near," Connell conceded. "However, there were other things to consider, the meaning of what else had happened then."

HE didn't elaborate, there was no need. Both of us could figure, with memory of that sour bitterness on the jumper, what Tom's death had meant to Carl.

"We skipped me," I said.

"Of course, Jim, on the basis of mutual experiences. Yours in jump-ships, mine on other worlds."

"And Will?" I didn't want to hear his answer, for I was sure it would be the same as mine.

It was: "A lapse, Jim, an error in judgment. And The Follower was very close."

Silence, a quiet between us that was all right with me. How could I begin to judge Marie?

Connell hesitated, then went on, "Jim, you call this object an unshielded jumper. I can understand how that might affect our thinking, but how does it explain us being by our ship one moment and on a desert the next?"

"I think, Doc, that this thing can do naturally what we're still trying to do in our labs: create a field that will move not only the jumper, but also take along a lot of things, outside of it.

"When we can, it's the answer to real trading between the stars."

"Living things, Jim?" Connell asked doubtfully.

"You know the theory, we weren't in the field on that jump to the desert more than a micro-second."

He was forced to agree, but with the agreement came a gaping yawn. "I'm glad you're on the first trick, Jim. Excuse me while I get some sleep. We need it because we don't know how far we have to go."

I couldn't believe him: "You . . . you mean we are going back to Earth anyway—despite what we talked about?"

"Yes. We aren't taking much chance, the odds are all on our side.

"You should have seen that faster than I did, Jim. How would you like to try to follow another jump-ship?"

Connell had a point, a solid

point, whose meaning I did know much better than he. But . . . "There's so much we don't know about that balloon with whiskers!"

"That's true about everywhere Man has been, Jim.

"There's always more on a planet—in its waters, on its surface, in its skies than we could ever have dreamed of.

"It was true on Terra itself. Our race started out taking chances, since it first became recognizable as Man.

"Man is still taking a chance every time he drops a scout on an unexplored world.

"In one way, let's hope we stay so: as long as we are challenged, we are a growing entity."

CONNELL slept well that night.

I know: I watched him sleep while I was on guard.

But on my turns to sleep, I could only cat-nap: my slumbers were broken by a dream in which heavens and earths were peopled by things never fully seen, never completely known, never utterly understood. Sure, I got some sleep, but I've never slept completely easy since then.

No, I'm wrong, that wasn't the only time we talked about our Follower. We talked briefly the next day.

We had both been kicking dirt over the fire. We were both

packed and ready to go. Connell gave the ashes a final foot-full and we stepped back.

"Let's the three of us hit the road," I said.

"Three of us?" Connell must have had a deep thought on his mind, because he didn't get it for a moment.

"You, me and that senile thing behind us," I explained.

"Senile." He worried with the word, then asked, "Not many people know senility these days, Jim. Where did you—?"

"Long time ago, one of my first hops alone," I said. "I guess that's why they sent me. If anything would have gone wrong, they wouldn't have lost an experienced man."

"Senility," Connell reminded me.

"I'm getting to it. I picked up a Safety Team from a planet where men aged too fast. I was alone going out and lonelier coming back. I had to keep them locked up away from me so that . . . well, take no chances, you know? And I remember watching them play childish games and get mad like kids do and. . . . It's just the same sort of feeling, something I can't put into words."

"Senile." He looked back at The Follower.

I gave it back to him: "If you have an idea, get it on tape now, while you're alive."

He didn't attempt to answer that. In fact, he was very silent all day.

THE first time it happened, I wasn't really sure that I felt it: a tiny tingle on my wrist where the finder was strapped.

But when it happened the second time, I turned to Connell.

"I thought I felt it, too," he said, "but I didn't want to say anything until you did."

"We should be able to see it soon," and my words came out in a rush.

After all, the jump-ship was my home.

He shook his head, spoke from experience. "No, Jim, too weak yet. We landed on grass, remember?"

He looked carefully at the horizon and so did I. Maybe it was hope that made me see it there, maybe it was the wind—varying one, first cooling one cheek, then the other—but where the blue of the sky touched the yellow-brown of the ground around around us, the land was not the color of the land around us.

To my eyes, it held a hint of green.

I said so to Connell.

"I've learned to trust your eyes," he said, and we began to push faster.

Yes, he started faster, but the very essence of the man checked

our progress. That inordinate curiosity of his would make him insist on stopping to look at a rock formation or go closer to one of the odd-shaped plants, and then tell me to record his comments.

One of the little animals scuttling around would engage his attention and cause a few moment's more of delay.

"Why, Doctor?" I would grumble. We're almost off this planet. Let's get to that ship and *really* be off."

He would grin at me. "Jim, we're safe now. We're *certain* as we can be of anything that—" a jerk of his hand to supply the missing word—"is simply following us to see how we conduct ourselves.

"And the Bureau can use every last fact we can glean. You would be surprised what they can deduce correctly from a single item."

"Let's get it to them in a hurry, then," I would argue, and, for a little distance, for a little while, he would hurry on with me.

Then, just as the spiny plants were beginning to be surrounded, replaced, by a thin crop of clumpy grass, he stopped one more time, pointed to a rock.

"Look there!"

I looked . . . and I was not sorry that he had halted us this time.

Glowing like a jewel against the drab grey of the rock was a tiny, perfectly round animal with four long legs evenly spaced around its body.

It was the most beautiful single thing that I had seen anywhere on what we had traversed of this planet.

"Lovely, lovely," Connell said, echoing what I was thinking and taking one step toward it. . . .

. . . another. . .
another . . .

HE stopped two long paces from the rock. Just a few moments ago he had been touching a plant and he was still wearing his gloves. He made a perfectly natural gesture, probably feeling perfectly safe.

I know I thought he was.

He started to tell me something, "Notice, Jim," and lifted his arm to point at what I should notice.

A perfectly natural gesture . . . or was it, maybe, a lapse in judgment. . . .

The animal was on his cheek, back on the rock, out of sight like a beam of vari-colored light flashing back and forth.

I think Doctor Harry Connell was dead before his face hit the ground.

I rolled him over, looked at him. All I could see was a tiny puncture wound on his right cheek.

For the first time in days, in weeks, I became conscious of that rasping on the ground behind us.

And the madness almost came again.

I turned, almost as I had turned before on the desert, as Eischen had turned in the mountain pass, to destroy myself in a wild, avenging attack upon the Follower.

Then I seemed to see all of them as I had come to know them, before and during our long walk. Face after face they appeared before me. . . .

. . . Ognowski and his crisped beard, straightening, stepping through the fence, freeing the rest of us. . . .

. . . Tom, ahead of us sampling possible dangers, sparing us what he might—and did—find. . . .

. . . Carl, the anchor that suddenly snapped. . . .

. . . lean and hungry Will, inverting his knowledge of biology to be our hunter. . . .

. . . *Marie, Marie, Marie.* . . .

. . . Connell, the Team Leader, in the end killed by the very quality which had made him the Leader. . . .

I remembered and I did not turn to attack.

I did what was necessary to the body. . . .

. . . and I forced myself to keep on going.

I MADE a mask for myself, loaded my belly with concentrates, checked my flash and Connell's, then pushed on all through the night.

The tingling in my wrist grew stronger with virtually every step.

Yes, I did something we had not done before and went on through the night. But I walked with a flash in one hand and a pistol in the other.

When anything stirred, I shot first, looked afterwards.

I kept on going. . . .

. . . until I could feel it beneath my feet, until the gleams of the flash confirmed it: the grass was thicker and thicker, becoming the velvet carpet it had been where we had landed. . . .

. . . until I was walking into the sunrise and the first hint of light could choke my throat. . . .

. . . because it was behind something round, but something round that I wanted to see, bulking bigger than the globe behind me, a warming roundness against the slowly-glowing sky. . . .

. . . and the rat could see the end of the maze.

I started to run.

Run fifty, walk fifty. Run one hundred, walk one hundred.

The roundness grew in size.

The planet's sun was behind

that roundness and I *knew*.

I stopped running.

I began to walk cautiously, to look everywhere, to expect death from anywhere.

And then. . . .

. . . I was there. . . .

. . . where the seven of us had stood so long ago, at the foot of the ladder leading into my jumpship. I wept.

Then I climbed the ladder slowly, expecting each moment to be snatched back to the Iron Desert and feeling, as I went up, that I was leaving a part of myself behind.

I was inside, closing the door, going to the pilot's place.

Except for a thin film of dust, everything was as I had left it, the controls still locked as they had been when I had completed our touchdown.

I reached forward, unlocked the controls, turned on the full-vision plates.

No greater, no lesser distance than it had ever been, the great ball floated with its tentacles—I imagined that I could still hear the sound—brushing the ground.

Not for the first time, not for the last, I wondered, *why?*

Had Marie been right? Had that thing simply been testing us? If so, for what purpose?

Accepting the premise of testing, didn't I now face a couple of more questions: was the testing completed?

Would I be allowed to leave?
There was only one way to find out.

X

STANDARD Operating Procedure Handbook:

. . . conditions will vary from planet to planet and so an exact sequence of actions cannot be outlined for every take-off. Each pilot will have to establish his own step-by-step procedure: in effect, his own count-down."

FIVE: I took the precious package of tapes and put them in the safe.

Well, this planet had at least been thoroughly surveyed, probably more thoroughly than any in the Bureau's history. Connell's rating was based on an encyclopedia of fact.

FOUR: I dressed myself in another survival uniform, complete with kit.

A new one, but I checked it.

THREE: I ran through the routine check of the instruments and the drive.

For me, there was no doubt: The Follower did innately that for which man needed a machine.

TWO: I watched the needles crawl steadily through the white of *WARM-UP* into the red of *READY*.

And Connell, Will, Marie also had been right: we had been tested as humans test lesser animals, but the ultimate why of that testing was no more understandable to us than it was to those we tested. In each case, it was outside normal experience, was more than dreamed of.

ONE: I stretched out my hand to start the kickoff drive. . . .

. . . and found that my hand wavered: I was afraid to find out if I could really go.

Had Old Senility outside finally tired of playing with this toy? When I had reached and mounted the ladder without interference, had that been the end of this childish but deadly game?

Then my fingers tapped the keys and the drive was on.

The planet fell slowly away from beneath me.

Time for one last glance at the vision-plates, for a not-to-be-final look at the big balloon centered there, a long look with the thought:

"I'll see you again some day."

THE END

ILLUSION

By JACK SHARKEY

Once again the Devil makes a pact.

And a devil of a pact it is.

TRYING not to choke on the rising yellow dust-ribbons from the smoking sulphur, Adam Carewe made himself stand tall and put up a brave front before the demon inside the neatly chalked red pentagram. "You took your time about getting here!" he observed, trying to look severe.

"I've come a long way," said the demon, not even slightly cowed. "Materialization takes time. I had to gather my materials, choose a shape—You know."

"With all the time at your disposal, you might have chosen a more becoming form," said Adam, hoping he was not going to suddenly be sick.

"People expect their demons to look this way," said the prisoner in the pentagram. "A handsome demon—they might later claim at the termination of the contract—" (At this, Adam could not quite repress a shudder) "could be construed as a form of trickery on my part. A genial outside that prevented my earthly employer from realizing I was rotten to the core. Not that

they'd *win* on such a flimsy technicality, of course, but this sort of appearance saves for a lot of fuss and bother later. This form is, as it were, a kind of physical analogy of my invisible spiritual nature."

"I'm sure glad I can't see the original, then," said Adam. "If your *body* is all scales and fungus and rancid blisters, your soul must be a wonder of hideosity."

"That it is," said the demon, studying one of its twenty-nine curving orange talons. "If I do say so myself."

"But we're getting off the subject," said Adam. "I want to tell you what you can do for me."

A rectangle of parchment suddenly popped into existence before Adam's nose, and he grabbed at it before it could fall to the floor. "What's—?" he had time to say, and then the parchment vanished.

"That was the contract," said the demon. "It now has your fingerprints on it. They're more damning than a signature, and cannot later be denied."

Illustrator
BLAIR



"But I didn't get a chance to read it—!" protested Adam.

"The terms are usual enough. We get your soul in exchange for services rendered. Besides, having summoned me, you're in no position to haggle. You're lucky to get the services as it is, since in even *attempting* to deal with Hell you toss your salvation down the drain."

"Oh," said Adam, very weakly. "Then I have nothing to lose by asking you for what I want, have I!"

"Not any more, no," agreed the demon. "You're all ours. Now, what is it you desire: Money, fame, sex-appeal?"

"More or less," said Adam, "but I think half the fun of such things is getting them oneself, so—I have three requests of you."

"That's our maximum allotment per mortal," warned the demon. "You cannot get more, later."

"These three will be enough," said Adam. "First of all, I want a pack of self-lighting—that is, as one is removed from the package it lights—cigarettes which will never be empty."

"A puny exchange for one-third of your soul," remarked the demon, despite itself.

"I am a heavy smoker," said Adam. "Besides, I have two more wishes to go."

"Filter-tip or regular?" sighed the demon.

"King-size, filter-tip, mentholated," said Adam.

"Done," said the demon. "Check the righthand pocket of your tattersall vest." Adam did so, and found the pack, a glossy crimson plastic pack, of the unfamiliar brand-name "Thermo-Puffs, by Perdition".

EXCELLENT," he enthused, putting it back. "Now, for my second wish: I want to be invulnerable."

"Smart thinking for a heavy smoker," complimented the demon. "However, we cannot make you *completely* invulnerable."

"What is the hitch?" demanded Adam.

"An invulnerable man's soul cannot be readily claimed," the demon explained. "So we have to limit your resistance to damage just slightly."

"Just slightly *how?*" asked the increasingly irritated Adam.

"You cannot be harmed in any manner whatsoever," said the demon, "unless you yourself do it."

"You mean suicide?" said Adam. "I'd hardly be likely to—"

"You don't know our contractees very well, then," said the demon. "Some of them grow terribly depressed as slow year upon slow year drags on . . ."

"I shall not," said Adam. "But I don't like the thought of having to be continually careful."

"Oh, no need to worry about *that*," smiled the demon. "Carelessness doesn't count. Should you, for instance, fall off a subway platform before the approaching train, no harm would come to you. Any fatal happening must be due *directly* to your own decision. You must, for instance, *leap* into the path of that train in order for it to destroy you."

"I don't know if I like those terms, anyhow—" muttered Adam. "Are you sure there's no other way?"

"Take it or leave it," yawned the demon. "That's the only invulnerability we ever provide."

"All right," said Adam. "I'll take it."

"Done," said the demon.

"I don't feel any different," complained the young man. "How can I *test* this power?"

"You can't," chuckled the demon. "That's the hellish part of it. Anything you do *deliberately* will *harm* you. But don't fret. The next time a taxi narrowly misses you, or an assassin's bullet merely lofts your fedora, you'll know whom to thank."

"Well—" murmured Adam, rather unhappily.

"Come, come!" snapped the demon. "I haven't got all eternity. Besides, your sulphur-sticks are almost burnt away, and I can't remain here without them. Fresh air—*ugh!*"

"Is *that* why they're used!" marveled Adam. "You know, I've often wondered why certain objects were employed to—"

"They're about to fizzle—!" cautioned the demon.

"Okay, okay," Adam said hastily. "Wish number three is a lulu, though. You'd better brace yourself."

"In this business, nothing would surprise me," said the demon. "Come on, let's have it."

"I wish," Adam said importantly, "that I be given the power to make the apparent-seeming into the real!"

"You mean," said the demon, not even mildly shaken, "the power, at will, to make optical illusions into physical realities?"

"Why—Yes, that's it," said a very subdued Adam. "You speak as though you've heard of it."

"Only a hundred million requests before your own," said the demon. "You're sure that's what you desire?"

"Positive," said Adam.

"Done," said the demon. The sulphur candles, guttering in their yellow pools, suddenly snuffed out, and in the ensuing darkness the demon went back whence he had come. Adam, turning on the lights, sighed in relief, and began to clean up the mess on the floor.

"I've done it!" he chortled, humming as he worked. "Done it!" It took him half an hour to

set things aright again, and at the end of that time no trace of pentagram or sulphur-pools remained on the floor of his room. He went to the door, took a self-lighting "Thermo-Puff" from his pack, dragged deeply on it, then blew a farewell plume of smoke at his erstwhile belongings, and slammed the rooming-house door upon his poverty-stricken past life.

AN hour later, having thumbed five times the doorbell of the apartment of the richest man in New York (J. D. Swenson, of the Wall Street Swensons), he was greeted by a sleepy-eyed, and not surprisingly angry butler in a silken dressing gown.

"Who are you?" the man said. "What do you want at this hour? Don't you know it's three in the morning?!"

"I want to see Swenson. Just tell him it's about money."

The butler hesitated, then invited Adam in. "I'll see if he can be disturbed," he said, and padded off on slippered feet across the expensive carpet toward the rear bedroom.

Five minutes later, J. D. Swenson himself was emerging from that room, his gray hair still damp from the comb, his face cautious, but as avaricious as ever it had appeared in newsreel photographs. "You mentioned money?" were his first words to

Adam. "If you merely mean you have come to *get* some, I'll have you horsewhipped and jailed; but if you mean you want to get some for *me*, then may I offer you a brandy?"

"With soda, please," said Adam.

When ice, soda, brandy, and a twist of lemon had been duly mingled in a tall crystal goblet and placed in Adam's hands, and the butler had discreetly been sent back to bed for the night, J. D. Swenson lighted an expensive cigarette and sat puffing, waiting. "Well, what's your scheme?"

"I," said Adam, "can turn optical illusions into real things. Shall I demonstrate?"

"Do," said Swenson.

"Are you familiar with the penny-over-the-sun illusion?"

"You mean close one eye, hold up a penny, and cover the entire sun with it? Yes," said Swenson immediately. "A trick of perspective."

"Exactly," said Adam. "This tiny coin, covering a burning star thousands of miles in diameter, is nothing to be sneezed at. What if it could be done in actuality?"

"Interesting to observe, of course," said Swenson, "but there's no money in it."

"No, but think of other similar feats," smiled Adam, going to the window and drawing the

drapes open. Outside, seen far across the canyon between the tall New York buildings, was another apartment house, and in the window of an apartment there was a girl, in the process of gowning herself in flimsy nightclothes. "You see that young lady there?" said Adam.

"The blonde in the pink peignoir?" asked Swenson, without rising or coming to the window.

"You have a good memory," said Adam.

"I have better binoculars," said Swenson. "But get to the point. What about her?"

"I can bring her here, in a few seconds," said Adam.

"Do so," said Swenson.

ADAM looked out, shut one eye, and by carefully moving the apparent position of his fingers, lifted the girl from her room and brought her squealing form directly into the apartment of J. D. Swenson. He handed her over to the man. "Easy as pie," he said.

"Yes, but," said Swenson, staring down at the struggling pink-clad figure in the palm of his hand, "what good is she at this size?"

"Well—" said Adam, uneasily, and halted. This feature of his power had not occurred to him. "You—You could hold her for ransom, maybe. Or start an institution dedicated to the dimi-

nution of women over six feet tall who wish to be petite, or—"

"Take her back!" snapped an angry Swenson. Adam grabbed the mewling figure, shut one eye, and soon had her back in the building across the street, where she immediately pulled down her shade and fainted dead away. "And now," said the grizzled old millionaire, "you can please me immeasurably by getting the hell out of here and letting me get some sleep!"

"Hold on," said Adam. "There are *other* uses! May I turn on the Early Morning Movie on TV?"

"I've seen it," muttered the millionaire. "An old Hugh Herbert comedy where they strike oil. Pretty awful."

"Not," Adam said desperately, "if you could *have* that oil, sir!"

"Ah. . . !" said Swenson, his eyes lighting. "Once more, you have my full attention. Go, turn it on!"

Adam did so, and luck was momentarily with him. The family in the film was just stepping back, with howls of delight, before the up-gush of a newly spouting oil well. "There you see the illusion," spoke Adam, shutting one eye and reaching out toward the screen, "and here," his hand went smoothly into the cathode tube's apparent oil-field, and came out cupped, with black shiny liquid in his palm, "I give you the reality!"

Swenson took the glop of blackness into his own two cupped palms, smelt it, tasted it, then spat it out in disgust. "Paint!" he grated, trying to get the stinging taste from his tongue. "Black paint!"

"Uh—" mumbled Adam, backing toward the door, "you could write an exposé on movie-tricker-ies for the papers—?!"

"Out!" shrieked Swenson.

"Wait, please," said Adam. "One last try?"

"Well . . ." said the millionaire, with dubious assent. "I suppose just one more try—But if anything goes wrong—!"

"Nothing will!" said Adam, once again going toward the TV, on which a commercial message was just appearing. On the screen, in a balmy, leafy forest, a young man and girl strolled beside a crystal stream that leaped from rock to rock down a mountain slope, and puffed at the product being displayed, "Springmist Coronas, the mentholated cigar".

"How about a cigar!" enthused Adam, reaching into the tube and pulling out the large package which was superimposed before the strolling couple.

However, it was a 29-inch TV, and the cigars proved to be twenty inches long, and two in diameter, plus the fact that the gurgling stream—albeit in miniature—was now cascading down

the front of the expensive TV set, and before Adam could turn off his will-power, the wiring caught fire and the set exploded with an ear-splitting *blam*.

ADAM, on his way downstairs, passed the firemen on their way upstairs, and was kind enough to give them the correct apartment-number before hurrying to the street and back toward his apartment house uptown. Scant seconds later, he heard sirens, and saw the police cars approaching in the distance. Before the Swenson building, two bluecoated men emerged, and, meeting a sore, scorched and dissheveled J. D. Swenson before the entrance, turned and proceeded to give chase.

Adam spun about and started to run, weeping. Invulnerability would not be much fun in a jail cell for twenty years, even if his cigarettes *did* never empty from the pack. One policeman, fatter and more out of condition than his partner, had already turned back and taken up the chase in the police car he'd arrived in, and he was gaining much faster than his partner on foot.

Adam saw a subway entrance and ducked inside just as a warning shot went over his head. He was smart enough to remember the demon's injunction about leaping upon the track, however, as he reached the platform level,

but the flat footsteps on the steep staircase behind him were going to get to him before the next train pulled in, subway cars being few and far between prior to five AM.

And then Adam had it!

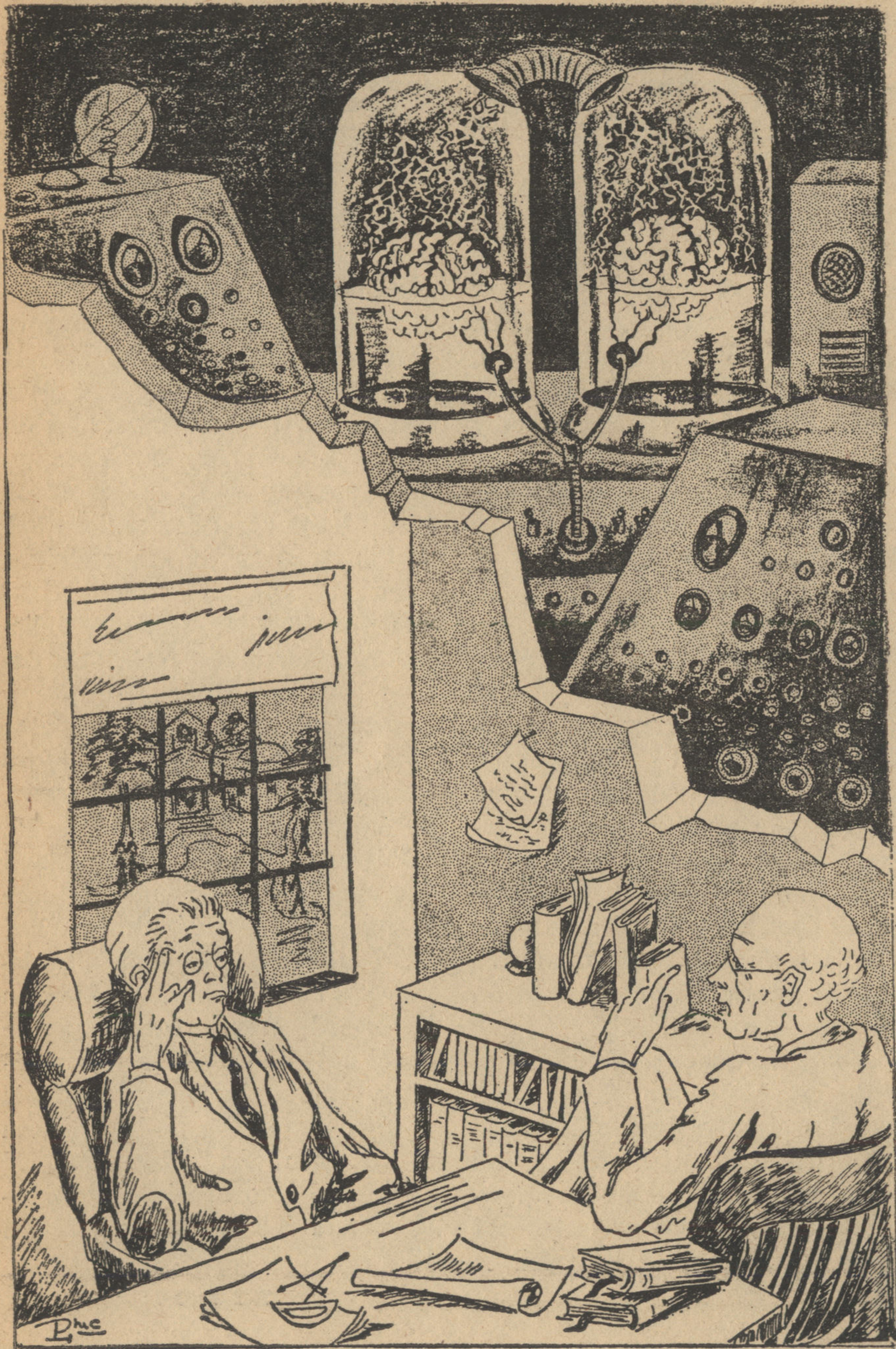
Turning about and facing the block-distant archway at the foot of the stairs, he shut one eye and used his will power. When the policeman came rushing in, brandishing his pistol, that stunned public servant suddenly found himself—after running the oddly long-seeming block—an ankle-high Lilliputian at the feet of a gigantic Adam. Law or no law, the policeman turned and fled. At the foot of the stairs, though, he got his courage up enough to turn and aim a shot at his unnerving quarry. Adam, enjoying himself immensely, turned and dashed toward him, giving a howl of rage and waving his arms in a terrifying manner. The policemen fled up the stairs just before Adam bumped his head against the roof of the subway station, and came to an apprehensive halt.

Now he'd done it! He'd walked right into his own apparent reality! Turning, trying to undo his frightening giantism, he started back, only to find that—the power being what it was—the roof grew even lower as he tried to advance.

He was trapped in a suddenly miniature subway station! Not even by crawling on his stomach could he get out again, up those now-narrow stairs! "Keep calm!" he cautioned himself. "Don't move again until you've thought this out!" So saying, he fumbled out his pack of "Thermo-Puffs", and was for an instant dismayed to find that in his helter-skelter flight all but one of the cigarettes had been lost. Then he remembered that the pack would never be empty, and, smiling with relief, took hold of the cigarette and pulled. And of course, it stayed right where it was at. "Damn trick-wordings!" Adam wailed, smokeless and nervous. "Well, that demon *still* won't win!" He knew his way out of the station at last: If objects looked smaller *before* him, then they must, naturally, be larger off *behind* him! He need only walk *backwards*, and the tiny station would perforce resume its former dimensions!

"You can't win 'em all, demon!" he chuckled, taking a backward step. Naturally, he could not see where he was stepping. And so, by the rules of his power, there was nothing there to be seen. So Adam stepped backward into absolute nothingness, and fell endlessly through it.

THE END



Body of Thought

By ALBERT TEICHNER

Illustrated by McLANE

The linkup of genius minds with a giant computer seemed to promise a rich future for Earth. But Grierson could not avoid the sense of something sinister in the cold room.

GRIERSON squinted sourly at the calling card as its two blurred lines of type played leap-frog with each other. Maybe a man of eighty-four was entitled to weak vision once in a while but, even though he'd read the confounded thing several times yesterday, he insisted on concentrating now until the words returned to their proper positions.

The Research Foundation
J. P. Hawks, Representative

Not Health or Opinion or Nutrition or any other imaginable kind, just plain Research. And not the hint of a home base address. That vagueness by itself had been enough to make him refuse to see the caller when Miss Hanley brought in the card late yesterday afternoon. "Tell him I receive no visitors during my

working day," he had snapped.

But a minute later his part-time secretary of twenty years standing came rushing back into his private sanctum without a by-your-leave (just when he felt a valuable equation coming on, too! he now reflected grumpily) and she had followed up this unprecedented intrusion by exclaiming: "He has a letter of commendation from President-Minister Weller and identity credentials from the Secretary of Science of the North American Cabinet!"

The interruption in his chain of thought had instantly provoked a vicious headache. "I don't care if it's Weller himself! I have an absolutely rigid working schedule—"

"He understands that, Dr. Grierson, and says he'd like to meet you during non-working

time for a few minutes—eight-thirty tomorrow morning. He says it's of crucial import—"

"All right, all right, tell him I'll be here—and now *get out!*"

THE equation had never come through, much as he had tried for it during the gloomy evening that followed. And his night had been filled with dire forebodings about this stranger presenting some new government request for research help when he would not, could not, lay aside his final formulation of quantum mechanics field theory. So few years left, so much still to do, or at least to attempt.

He stuck the ridiculous card in his pocket and, relaxing a little, was staring out the window at suburban Princeton's greenery when the brisk knocking began. Exactly eight-thirty—at least this particular pest knew how to be on time.

"If you turn the knob just a few degrees," he shouted, "you'll discover the obvious fact that the door is not locked!"

A tall, thin man strode in, right hand already extended while the left prepared to place a briefcase on the desk. "Always an honor to meet a Neo-IQ Master," said the visitor.

"You're a salesman, I know it. Well, set yourself down for a minute if you must but I'm not buying anything even if the

President himself says it's just what I need."

"Selling something?" Hawks smiled, unzipping the briefcase, then resting his splayed fingers across the rich brown leather. "Dr. Grierson, I'm *giving* something away."

Such a sharp-featured face! Grierson had the feeling that if the nose axis came to rest directly before him, the cheeks would disappear completely behind that nose, leaving only a topological nightmare. "Whatever you're 'giving away,' I don't want any. I have an overlarge house and plenty of money, as much physical comfort as a widower can find or needs, and too many ridiculous honors for further social ambitions to rear their ugly heads. What can you give me that I need and/or want?"

Hawks' eyes flicked around the room, then fixed themselves intently on the older man's face. "Answers to questions. You need them and, when you see them, you will want them."

"Answers to what questions?" In some strange way this hard-pushing fellow was beginning to get the upper hand; he had to know what exactly the crackpot scheme consisted of. "Ordinarily, Mr. Hawks, my wastebasket receives two unread designs for perpetual motion machines per week."

"But I daresay the President-

Minister has not recommended *those* to your attention.”

“Which is the only reason why I am waiting in this case for a brief explanation. What are you giving away this week?”

Hawks flipped a thin pile of sheets from the briefcase and set it in the middle of the desk. “The final solution to the general problem of three bodies.”

Grierson burst into laughter but it rose to a choking cackle and he had to struggle wordlessly until the attack was suppressed. “Oh, you are a clever one—selling even the Secretary of Science that impossible bill of goods!” Hawks’ face revealed nothing except continuing, polite attentiveness. “Young fellow, how much mathematics do you know?”

“Nothing on the level of specialist skill, sir, but I am assured that this problem is solved as well as the problem of four bodies.”

“You are assured—this isn’t funny any more! Do your employers think I’m senile? Get these sheets off my desk—I always begin work promptly at nine—and let me explain just one thing to you. In attacking the *general* three-body problem my predecessors were trying to devise a formula for use in describing the precise functional interrelationship between any three interdependent bodies in space—

gravity perturbations of orbits for example. Well, if you’ll glance at any competent encyclopedia you’ll see that Bruns, Poincaré and many others long ago showed that there is no general solution—only specific ones are available to the mathematician’s brain.”

HAWKS stood up, undisturbed, in a series of neat gestures closed the briefcase and swung it to his side. “This, I have been told, is true of past investigations. Nevertheless the sheets which I *refuse* to take back are absolutely correct.”

“Now, don’t tell me a machine triumphed where a brain failed because this is too creative a problem for even the most advanced machine.”

“I am not saying that either, sir.” He glanced down at his watch without raising his wrist from his side. “Now eight-forty and I will be out of here within thirty seconds of your promising to spend one single minute. that’s all, one single minute reading the first page. I will call at four-thirty and ask your secretary—I understand she just works afternoons—if you care ever to see me again. Whether you do or do not, these questions will be yours to dispose of as you see fit.”

“All right, one minute for the nonsense and good day, sir.” He watched Hawks open the door

and started chuckling. "You remind me of something from my college days, young man. Needed money then and I went from door to door selling brushes. Even if the lady of the house bought nothing we'd leave a little free sample like a nailfile, no obligation attached but surprising how nice people were, how many mail orders I'd get later that way—bread cast on the waters, et-cetera. So I still say you're a salesman."

Hawks' expression was sober, non-committal, as he said: "It has been an honor, Dr. Grierson. Good day, sir."

Eight forty-two. Still chuckling at the sixty-three year old image of Sophomore Grierson handing a powder puff to a startled housewife, he pulled the top sheet over. One minute in sentimental honor of the past.

For nonsense the first partial differentials had an ingenious beauty to them, like an opening canon in the *Well-Tempered Clavichord*. And then the lines were growing into each other with a dense richness not even Bach could give him. . . .

* * *

"Dr. Grierson, Dr. Grierson, are you all right?" He was struggling desperately to disregard the hand rocking his shoulder and the high, panicky voice, but

neither intrusion would go away.

Finally he shook his head and looked up. "Miss Hanley! What right do you have to break in like this again?"

"Oh, you're all right after all, Doctor." She was helplessly shaking her head. "You had me so frightened. First I kept phoning whether I should come in early and there was no answer, then when I did come in, the door was open and you were here staring so hard. I—I thought something terrible had happened."

"Perfectly organized," he mumbled, returning to staring at the bottom of the last sheet.

"Oh no, not again!" The shoulder rocking resumed but this time he was smiling when he turned toward her. He pulled himself to his feet and suddenly gave her cheek a pecking kiss. "The most beautiful development I've ever seen!"

Miss Hanley fell back, shielding her bosom with a steno pad. "Dr. Grierson! Do you want an aspirin?"

"No, no, I'm not a nasty old man, I'm just a happy mathematician. And don't look at me as if I were sick some other way. The thing I've been studying has made me ten years younger."

When Hawks called late in the afternoon he even raised that ante. "Young man," he shouted into the phone, "I don't know where you got that stuff but

you've added fifteen years to my life."

"Oh." There was a peculiar pause and then Hawks went on, "You did find them satisfactory."

"Satisfactory? It's a supreme masterpiece! Who did it?"

"Well—uh, Dr. Grierson, we're now entering the sensitive phase of this matter and personal, direct contact might be best."

"That's easily arranged, Mr. Hawks. Do you know where I live?"

"Yes, I'm at the Inn and you're less than a mile away."

"You seem to have done a good research job on my personal life, too. Well, I've no objection to anything, not after this—any strings attached will be welcomed."

"I hope you're as satisfied after we've discussed everything, Dr. Grierson. Shall we say eight this evening?"

"Fine, fine."

"Oh, there's just one thing. Please don't mention anything about this to anyone—not until we've had our little chat certainly."

"Good enough," he rang off cheerfully.

But a vague doubt immediately began gnawing at him. This was all too mysteriously miraculous—like those pacts with the devil poets favored, pacts that gave signees vast temporal pow-

ers at the price of eternities in hell. Suppose this eighth wonder of the mathematical world were snatched from him as abruptly as it had been bestowed because he refused to meet some impossible demand? He'd be able to reconstruct fragments but no man alive could reproduce that whole fantastic complex of ideas unless he had first spent weeks studying the ten sheets.

He placed them in his attache case and typed up a letter to his New York bank, instructing them to place the accompanying sealed envelope, unopened, in his safety deposit box. Then he went down to the instant reproducer in the basement. Fortunately no other Institute people were around so he quickly pulled off three copies of each sheet. One set of ten was put in an envelope which in turn went into a larger one. That was for New York. Another he mailed in a sealed inner envelope to his farm in Maine. The third he locked in his office safe. Then he proceeded home, the attache case gripped tightly under his arm as if it were Top Secret.

Which, for the moment, it really was even if it lacked the thermite bomb under its lid for instant destruction at the threat of capture.

HAWKS was even more briskly business-like than he had been that morning. As soon as he

sat down, he said: "I imagine you've already made copies of the equations and placed them where they can't be reached."

"Mr. Hawks, there's no need to spy. Yes, I did make some copies but I already told you I'm most grateful and eager to cooperate."

"We haven't spied, just assumed you'd be cautious at this stage. And I can tell you that there's no real need for covering reproductions because, no matter what you decide about the Foundation's proposition, those equations are now yours, sir." He leaned forward. "There are two things, though, that you must absolutely swear not to repeat without our authorization. One—not to reveal from whom you've received them. And two—not to reveal anything I tell you from this point on."

"Suppose I say I don't want to hear anything further? Then I'm not even bound by pledge one."

Not a muscle flickered in the sharp face. "As yet, you aren't and we couldn't stop you, Dr. Grierson. But I would deny the whole story. In all frankness, who would believe you? I know very little about your specialty whereas you're one of the half-dozen greatest mathematicians of all time."

"I suppose I am. But, compared to your man, I'm literally nothing." He smiled. "I just wanted to see if there was any

unpleasantly threatening side to this proposition. Since it's purely voluntary, I give you my unqualified word about keeping silent."

"And we know from studying your life history, sir, that word is absolutely good."

"Well then, what do I have to buy?"

"Nothing. We want to *buy* something else—your brain. If you feel the equations are insufficient payment, name us a price."

"But isn't that silly, Hawks? You can get all the brains you want for dissection, mine offers nothing special in that direction. Of course," he shrugged, "it can easily be arranged, my present will bestows the grey matter on a lab here at the university. It could be changed and you then will be able to slice microscopic specimens to your heart's content when the time comes."

Hawks gave a patient sigh. "We don't want to dissect it—what a waste that would be! We want your brain live and whole."

"Now wait a minute!" Grierson jumped to his feet with a force that he had thought two decades gone from his body. "Of all the savage, inhuman experiments—I can't believe the President and Science Minister know what you're up to!"

"They're among the very few who do." He caught the old man glancing hesitantly toward the equation sheets. "No, don't let

those solutions enter into your decision. Those belong through you to the world from now on, no matter what you choose. Dr. Grierson, this isn't some ultimate vivisection madness I'm suggesting. We want you to live out your life and will be perfectly satisfied to have the brain after your natural death. People leave corneas to eye banks, don't they?"

"But I thought you said 'live' before."

"It will be alive again, functioning symbiotically as part of a computer complex."

THIS has been too much to absorb for one day." Grierson, who had been about to resume his seat, started pacing the floor. He gave his temple a rough tap. "How can you be sure about managing to get this in time? I mean, if I remember the little physiology I ever knew, the brain moves into irreversible death faster than any other part of the body. Within a very few minutes of clinical death the lack of oxygen has already created serious damage and, after just a few more minutes, the cells are permanently wrecked."

"That's precisely the truth as the medical fraternity now knows it and *approximately* the truth as we know it also." He took a sheet from his briefcase without even having to look down to see if it

were the right one. "Look the figures over."

Grierson glanced quickly but carefully down the sheet. "By this process you believe you can harness the knowledge and experience of a brain if you get it within four hours."

"We *know* we can, Dr. Grierson." He took back the sheet and put it away again. "And unless you're planning a trip to some outpost on Mars we should be able to reach you within four hours of clinical death."

Now he had to sit down. "Well, I must say this has floored me. Not convinced, mind you, because even though my mind accepts the idea after those equations, my feelings simply haven't caught up with the idea." There was a slight chill in his fingers and he held his palms close together until more warmth seeped through his hands. Suddenly he slapped the arm of his chair and grinned: "It's a deal if you accept my low price."

"Any price within reason."

"Well within that, young man. First, I must see the setup so I can *feel* it exists."

"That can be arranged."

"Second—and lastly so you can relax now—who will be resting beside me in this symbiotic nirvana?"

But Hawks did not relax. "Well-l—there's Larkoff who died two years ago."

"Larkoff! I used to meet the old gentleman at meetings of the American Math, most brilliant pure theory man of his generation." He caught himself up short. "How could he solve a problem in death that he could never get near while alive?"

"Because his brain now functions in conjunction with a computer that executes the brain's commands with a speed no human nervous system could match and—"

"Who else?"

"Halstead, dead a year."

"Never heard of him."

"Just the most important evolutionary entomologist of the past two centuries."

"A bug man?" His disgust seemed to push his face past the centenarian mark. "Not the least bit interested in minor biological studies."

"I doubt whether he had any greater interest, sir, in mathematics." Now Hawks was leaning forward more intently than ever. "This is the very heart of our matter. Two first-rate brains operating in tandem have accomplished more than they could separately. It's not just adding two IQs together, it's almost like multiplying them!"

"I can see it might be so but now," he smiled, "I'm going to be a cranky old man and insist on knowing who else?"

"We only have two so far."

"That's the impression I had from what you said. No, what I want to know is what other persons still living have agreed to this?"

THERE was an uncertain pause. "Dr. Grierson, this is a very delicate matter since we wish to respect each man's desire for privacy. We will *not* reveal your name to any one we may approach save with your permission." He stopped, waiting for some response, but when there was none, went on. "Well, I do have this man's permission so I can tell you. The one other so far is Dr. Relik, the neuro-physiologist."

"Relik!" he exclaimed. "Why, Relik's right here in the Institute. I pass him in the lobby every month or so. The fox, I'd never have guessed!"

"I'm glad to hear that, sir. Discretion's an absolute essential in these early stages when public disclosure could cause terrible complications, religious disturbances, political pressure by men wanting their brains to be preserved, many things!"

Grierson slowly pulled himself to his feet, tears in his eyes, and shook Hawks' hand. "It's been such a wonderful day that I—sir, I can't talk further with you now. But I'd be terribly honored if I could see your research center some day."

"Today's Thursday, isn't it? Would Saturday noon be all right?"

"Better than I expected—perfect!"

As soon as he was gone, Grierson scrambled desperately through the telephone book in search of Relik's number. Twice he dropped it but he finally managed to dial his house. A woman with a thin, cultivated voice answered.

"I'd like to speak to Dr. Relik," he said.

"He's not in—"

"Then tomorrow at his Institute office."

"I'm afraid he'll be busy at the laboratory. Would you care to leave a message? I'm Mrs. Relik. Can't keep up with his activities these days."

"Happy to speak to you, Mrs. Relik. This is Dr. Grierson, Dr. Newbold Grierson, and I would like to meet him as soon as possible."

"Monday or Tuesday would be the earliest, I imagine, Professor. I'll tell him to contact you."

"I'm at the Institute, too. Thank you, Mrs. Relik."

Disappointed, he paced the floor of his library for a while. It would have been so much better if he could have spoken to his future companion in death before visiting the Foundation, but the matter just hadn't fallen out that well. Everything else,

though, had today and when he tried to look up *cortex* in Grey's Anatomy he could not even concentrate enough to find C in the index. After a while he went to bed where he could endure his over-excitement a little more comfortably.

When he entered his office the next morning his phone was ringing. It was Relik. "Heard you wanted to talk to me."

"Not on the phone."

Dead silence. "All right, Grierson, my office is on the second floor, right wing. I could see you now."

"I'll be right there!"

Relik himself opened the door. He was a tall, erect man of about sixty with steel-grey at the temples as a final touch to his distinguished appearance. "Come in, come in," he said cordially. "Always wanted to talk with you but so busy, you know how it is, that I never have a chance."

"Thank you, I can well imagine, your wife didn't expect you before next week."

"Poor Nancy," he chuckled, "should keep a better schedule for her. Most of the time I'm at my lab across town, then there are all the out-of-town engagements." He sat down behind his desk after proffering a chair. "Fortunately had a last-minute cancellation."

"Extremely fortunate for me." He looked around the office.

"Oh, no one else is here. We can speak frankly if that's necessary although I can't imagine what would require privacy—" He struck a spinal cord hanging from a stand at his side and vertebrae rippled like a string of Buddhist temple bells gone tongueless. "Not quite as ghoulish as it seems. Only an ape's column."

"Well, I hope what I'm about to say doesn't sound ghoulish either, because it doesn't strike me that way." Relik was instantly serious. "I have spoken to Mr. Hawks."

"Should that mean anything to me?"

"Symbiotically you might compute it that way."

THERE was a gleam of understanding in Relik's eyes and, throwing caution to the winds, he leaned over and pumped Grierson's hand as if they were at an old grad's reunion. "Ah, that's wonderful, wonderful! They do know what they're doing! Forgive me for acting thick just now but you know how cautious we have to be. When did it happen?"

"Just yesterday. I tell you I haven't stopped gasping since it began—so much involved here. And I wanted to talk to you about it before I looked over the Foundation's center."

"Yes, I've seen it. Amazing

place. It's in a mountain valley and—" Once more he froze up. "No, first I'd like to know what took place yesterday."

Grierson froze for a moment, too, but then, on second thought, the other man had a right to hesitate so he quickly told him everything that had happened.

Relik leaned far back in his chair, hands behind head, and stuck his lower lip out at the ceiling. "Yes, very much like my introduction. This Hawks chap presented me with the most extraordinary data on synaptic relays. Have fifty people working it all out now." He swung quickly back into a normal position. "Not a string attached to the gift either, can you imagine such a thing!"

"No," Grierson said, "it had to happen for me to believe it."

"You'll see, the center's fantastic, too. I don't think much more than half a dozen people can know about the whole layout, including the President and Science Minister."

"That hush-hush, heh?"

"When you consider the social implications, you realize why. But the thing to do is see the place for yourself, arrive at your own conclusions. When are you going?"

"Tomorrow."

"Hmmm, so soon! Why not come in Monday to talk it over with me?"

"Oh, you won't be out of town then either?"

One eyelid seemed to flicker but then Grierson decided it was due to the breeze outside shaking the shadow of a branch in the office. "Surprises me myself, now that I think of it," he laughed unsmilingly. "I don't want to sound as if I'm rushing you, though, Grierson. If anything's troubling you about the set-up just say the word."

"No, I'm more than satisfied."

HAWKs picked him up promptly at noon. It was a large car of modern yet conservative lines and the well-upholstered interior made a perfect acoustical sounding board for the Mozart symphony on the stereo player. "The Hafner," Grierson sank into the deep comfort of his seat, "always been one of my favorites."

"That's what we heard. You'll have your eighteenth century all the way to the lab."

"Everything to make a man comfortable. You know, Hawks, I'm reaching the age where it starts to be important." He closed his eyes to drowse. "I hope my lonely brain will be as comfortable some day."

"It won't really be lonely, though, will it?"

Without opening his eyes, Grierson nodded. "That's true. Sometimes I'd like it to go on for-

ever, absorbing all the harmonies the universe has to offer." Then he listened very carefully to the symphony, as if he had never heard it before. And in a way, he never had; beauty always happened for the first time.

Several symphonies later he came back to the world of car and road, and looked out to see high green hills rising up in every direction. "Pennsylvania? New York?" he asked.

"No, still Jersey," Hawks answered, bird-fine eyes concentrating on the narrow curves. "Way up north in Sussex."

"So far this whole project seems to be concentrated in a small area—Relik and me and your laboratory, all in one state—and a small one at that."

This time Hawks did turn and look at him as he answered. "Better control in the initial stages. When it's all lined up, we'll be all over the place." They started around a more gradual curve. "Ah now, there it is, sir!"

A quarter-mile to the left a long, slickly functional building rode in a small sea of high meadow grass. It was about fifty feet lower in elevation and a small all-weather road wound down through some forest land to it. Before they could get on this road they were stopped by a uniformed guard at a high fence. Although the man gave Hawks a nod of recognition, he insisted on

seeing a paper authorizing the entry of two people. Then with a curt gesture of his thumb he passed them through, locking the gate behind them.

"Haven't gone through that kind of routine since I did Top Secret work in the Final Great War," Grierson sighed, catching himself before he could slip into that nasty old man's habit of garrulous reminiscence—wasn't a bit fair to other people.

"Just a regular routine at all big research computing centers. Which brings us to something very important, Dr. Grierson."

The large building was now visible through the trees and there were several people strolling around, chatting with each other as if they were enjoying a break. "I was under the impression that only a handful knew about this brain bank."

"Exactly the important point I want to emphasize. There are over a hundred workers from janitors to Ph.D's here and only three of them know about the brain bank. For the others this is just one more advanced computer complex where each man concentrates on his specialty and doesn't think even of attempting the impossible, learning what's going on in all other departments. Until you go into The Room you're merely another scientific tourist—of which we have had many as part of the window

dressing—whose interest is thinking machine operations."

"I won't forget that." He smiled. "I love to unravel riddles."

"What do you mean, Doctor?"

"Well, I've gone through these tours of inspection before. There'll be many guides as we go from section to section, won't there?"

"Why yes—"

"Permit me to attempt to guess who the vital three are. Before we enter the really secret area I'll hand you a sheet of paper with the names on it. See if I guess correctly."

"As you say, Dr. Grierson."

HE chuckled to himself as they pulled into the reception garage. It would be easier to deal with them in case of some difference arising if they did not see him as the least bit senile. For the same reason he refused the offer of a motor-chair as they got out of the car. "Walking about on my own two feet will do me good," he said.

Fortunately, though, there were moving walks in many sections of the seemingly endless building because, after a while, his toes did ache a little. Got touched with cold so easily these days, like the ancient scurvy whose coldness began in the feet and ended at the heart. Well, he smiled to himself, it was going to

be a slow upward progress in his case and all these young men would still have to wait a while.

There were so many of them, one white-smocked group after another, to lecture on all the computer's intricacies. And so many kinds of equipment, too! Everything glittered with ingenious efficiency and each unit did absorb his attention to some extent. But much less than they would have if, beyond them, did not lie that Room.

After about an hour he scribbled on a piece of scrap paper,

The three men are Dr. Hasbrouck, the biochemical, engineer, Harrison, the electro-statistician, and Monmouth, the mathematical physicist. and handed it to Hawks whom he had kept at his side through the tour so far.

For the first time Hawks almost seemed to lose some of his composure but, returning to polite expressionlessness, he handed on the paper to Hasbrouck who was in the accompanying group at the time. He was a short, intense-looking man of about forty and only his stubby fingers betrayed nervousness as they carefully shredded the note.

Hasbrouck casually dropped the paper into an incinerator bin and took his guest by the arm, saying, "Now, sir, we have a series of private secondary research chambers to pass

through." He waved to the others who scattered to their own special domains and electronically cued open a door with one end of his identity badge. When the door slid soundlessly shut, the three men found themselves in an empty antechamber. "Who told you about us?" Hasbrouck asked, attempting to assume an unnatural casualness.

"You mean my little estimate just now?"

"Yes. Yes, that's what I mean. Was it you, Hawks?"

"Of course not."

"I can't imagine why you think somebody told me," Grier-son chuckled as a door ahead started sliding open. "Don't you know old men are crusty, egocentric troublemakers? Makes the blood flow more youthfully, you'll see when you get my age. Now then—you were the one fellow with us almost everywhere and you had an air of authority."

"But the other two—out of ninety scientists to get them right!"

"Oh, a combination of things, the special, intense eagerness they showed, a few glances exchanged with you, most of all the special way they looked me over as if they were weighing the inside of my skull. You know, kewpie doll to the man who gets my weight to the closest gram."

Hasbrouck was solemn as they stepped into a long, narrow room

lined with cables. "You're too valuable a man for tomorrow as well as today—I assure you we don't view you as a slab of frozen specimen meat, we never will, sir."

"Fine, fine, young man." Grierson patted his back and felt cantankerously pleased with himself. "I know that. I'm good at spotting people, always have had a natural talent for it."

ONE up on them, he chuckled, but awe overwhelmed that satisfaction as they stepped into the third chamber and he saw the pair of brains suspended in clear solution in two neighboring glass tanks. Hundreds of fine filaments hung above the liquid, barely touching the surfaces, and occasionally tiny sparks moved from the filament tips while others jumped in the opposite direction. Here and there thicker strands connected directly into the floating cortexes.

Harrison and Monmouth came in through a side door and began explaining various phases of the operation. The most delicate elements were those which amplified the brain outputs in hundreds of infinitesimal step-up phases. Most of the time the circuits were kept closed off from the main computer but several times a day the brains were synaptically relayed into the total mechanism.

"You actually mean that Lark-off," he pointed first to the brain on his left, then the one on his right, "and Halistead think through the machinery without anyone else realizing it?"

"Not quite as extraordinary as it sounds," Hasbrouck explained. "When the output goes into the main machine on the outside, it just seems to be the output of another machine. No doubt, though, it slows our operation up, maintaining pretenses." He frowned. "But even when we've lined up the full minimum quota of cortexes some day and when the need for secrecy's ended, it won't of course achieve instantaneous solutions. For example, the three- and four-body problem general solutions had to be re-cycled over a period of over ten months. At maximum quota, I calculate it would still take a few months."

That made Grierson feel both greatly impressed and vaguely uneasy. "Even ten months is the most incredible miracle, Dr. Hasbrouck. Your-uh—what shall I call it?—your brainchild successfully accomplished what centuries of thought could only end up deciding was impossible!"

Hasbrouck darted a glance at Hawks, then said: "We are proud. Today this is a special kind of immortality but eventually none of humanity's painfully achieved brainpower will be lost and there will be vast cortical

banks preserving all the experiences of the race. With that kind of supporting knowledge how can there be any limit to the achievements of the future?"

Grierson shook his head with wonder as they went on to describe the other features of the operation to him. After another half hour he had to give up. "Too old to take any more in," he sighed. "I would like to go home now."

A side entrance glided open and down a long, unadorned corridor they could see the car waiting. As they started to leave, Hasbrouck pointed to the two tanks and said, "Oh, I almost forgot, Dr. Grierson, the one on the left is Halistead, not Lark-off."

"Good of you to correct me," Grierson said earnestly, "but I've already seen enough to know how limited my personal speculative powers are."

ON the way back he did not catnap but watched the gentle countryside slip by as they moved between the shadowed folds of hillsides and open areas where the westering sun still blazed obliquely down. Something beyond reason's grasp, unfathomable, was making him feel unhappy at the end of what should have been the most exhilarating day of his life. Was it the fear of death? No, there had

been too many years absorbing the harmonies of nature for that dread to have much hold over him any more. And now even a physical part of him, the most precious part, was going to be granted a special kind of untroubled immortality. He tried to shake off the sensation by talking.

"A stunning experience," he said, "but you must be used to it by now, Hawks."

"No," the other man shook his head, "it still gets me."

"Maybe that's because you're the one non-scientist I've seen who's involved with it—barring the President of course and I haven't spoken to him in fifteen years and then only briefly."

"He remembers you, though. He was a Senator then."

"You're sort of liaison man, aren't you?"

"You might call it that." After he shifted gears for a straightaway, Hawks turned and looked steadily at him. "A little scientific knowledge in a lot of fields but nothing much in any of them."

"A sort of super-salesman."

"I guess you were right about that," he smiled. "I'm going to have to recruit other scientists without representing any specialty over which they may feel they have prior claims. My past experience has been in international commercial diplomacy and that's supposed to help in liaison

between the Foundation and political people."

"Makes sense," he said, still unhappy.

SUNDAY only deepened the uneasiness. Since the age of thirty Grierson had never spent more than two straight days away from his own researches but now with the better part of a week already slipped away, he still could concentrate on nothing, and he felt as stale as a concert pianist who briefly neglects his exercises. Maybe he was being resentful of something but what, what the devil could it be?

When he saw Relik the next day the neurologist was eager to hear how impressed he had been and Grierson went on at great length for his benefit. Then Relik asked, "Anything there, though, disturb you?"

"Funny you should ask that. No, not particularly there but, you know, the *whole* setup rings a little hollow to me."

"Hollow?" Relik looked perplexed.

"No, that's not what I'm trying to get at." Annoyed with himself, he pinched his earlobe, then the two fingers exploded away from each other. "Sinister—that word comes closer to it, sinister!"

"That's even more puzzling, the people I met all seemed so decent and dedicated. Dr. Grierson, you're not thinking of withdraw-

ing, leaving me alone among the living donors?"

"But are we alone? That's the question, part of the somehow sinister side." He brushed irritably at the air in front of his nose as if a fly were threatening it. "No, no, of course I'm not withdrawing, it's one of the greatest things ever devised and there couldn't be a greater honor and I've given my word. Of course, that couldn't be absolutely binding if this thing became a menace to humanity rather than a blessing."

Relik stiffened. "How could that be?"

"I don't know and I don't believe it will work that way but there is some deception somewhere here, like that business of our being the only two so far. I don't believe it."

"Why not?"

"When Hawks—and there's another aspect that makes me uneasy in a way I can't clarify at all—when Hawks spoke to me he whipped out a sheet of figures on brain revivification from a briefcase with perhaps ten compartments without even glancing down to see if he had the right one. He did have it."

"So?"

"Just a little thing but it strengthened my impression that he was already accustomed to meeting prospects' objections. Oh, I might be wrong on that lit-

tle gesture, don't let an old man's wanderings annoy you that much, Relik. Anyway, I could mobilize better arguments for the possibility of others being lined up but it would take needlessly long now. The point is that, if there is such a list of fellow donors, I think I can reconstruct it. They would all be in the top zone of Neo-IQs. The system is much more dependable than the old IQs and The Research Foundation would want only the best raw material for its building units."

"Talk about needles in a haystack!" Relik made a little smile and studied a *Texturologie* that was hanging on the wall. "Grierson, have you noticed that painting on the wall. Dubuffet did that kind of work about a half-century ago, oh, about the nineteen-fifties. Each canvas just showed pebbles or fine dirt granules or grass seen from above. Now this one is of grass, must be thousands of blades there. You know, they say he painted a matchstick in it but I've been looking at it for fifteen years and never have seen one bit of it!"

"Well?" Grierson said a little grumpily. "If there's a matchstick in your conversation I'm not having any better luck. What are you driving at?"

"Just, my good fellow donor, that there are almost one hundred thousand top zone Neo-IQs

in North America alone. If that many have been approached, this couldn't have remained hush-hush and, if the number's smaller, there's no way of tracking them down."

"Ah," said Grierson, warming to the chase, "you forget that in my field there is such a thing as negative proof where you proceed by a process of elimination. The Symbiotic Computer needs brains that are not only top zone by nature but that belonged to men who most successfully accumulated and created knowledge. That second factor cuts down the total considerably."

"It would still be in the thousands. What possible third factor—"

"I just don't know." He probed the complex wrinkles of his shrunken chin with a well-manicured fingernail. "But I'll figure that out, almost have it now as a matter of fact, almost but not quite. I'm willing to bet that I'll have a reasonable list by tomorrow."

"If you do, let me see it," Relik laughed. "Meanwhile, I'm willing to bequeath my brain sight unseen. Anyway, Grierson, suppose—mind you, I don't agree with your reasoning so far—but let's just suppose you're right. What's so awful about their trying to maintain secrecy at the present stage?"

"In a way, nothing, because

precautions are understandable. In a way, everything, because the people who are giving the most have insufficient say in controlling the program. If we scientists don't watch our step we're going to have the same old managerial trouble we've encountered so often in the past—a President-Minister, decent as he is personally, and a super-salesman making the major decisions."

"Good grief!" Relik said angrily. "I can't believe it's going to that way, I just can't. Eventually we'll be called in."

"Again, you're probably right, but this is one more case where we have to place the values of science above the values of secrecy. We should force the issue, there are all sorts of knotty problems that ought to be straightened out by us before we go into those tanks."

Relik threw up his hands, then stood up. "Maybe so, maybe so." Suddenly more tolerant, he added, "If you ever cook up a list, will you let me see it?"

"Of course," Grierson said, relaxing a bit, "you're the only one I can show it to without breaking my word. When you see it, you'll change your mind."

As he passed the painting, he peered at it and started out, shaking his head and muttering, "I'll take music."

"Why not," replied Relik, "try to take both?"

THE next day he was back and he had a list.

"Twenty names altogether, think I've met practically all these people," Relik murmured as his eye skimmed the page. He very slowly massaged his eyelids and asked, pinching the bridge of his nose with eyes still shut: "How'd you cut your possibilities down so much? You seem to have experts in everything here, a regular universal encyclopedia."

"I applied a third criterion in addition to top zone Neo-IQs and professional standing. It was *recent* important accomplishments, on the assumption that other scientists would be approached with gift solutions the way we were. Now, it just so happens that the Abstracts Division of the library keeps such a list and there were about eighty names on it."

"I hate to be your Socratic gadfly," Relik said, strumming the edge of his desk, "but, assuming others have already been approached, they wouldn't necessarily have revealed the gift solutions as yet."

"That certainly may be true in a few cases. But then I hit on the critical fourth yardstick which might give us the names we want—even where the third one did not work. I put all four criteria on the library reference file sorter and this is the list I got."

"What was the fourth one?"

"Old age. Don't you see? They want to line up *good* prospects. With average lifespan about ninety-one they're not going to concentrate on forty year old kids." The slightly worried look that had been on Relik's face since he had entered now deepened. "I just assumed you were an exception, that they needed your specialist knowledge at a later date."

"No, frankly I don't see, Grierson, don't see it at all."

Grierson leaned forward too eagerly and fell into a coughing fit. "I can even hypothesize a model of organization relationships whereby we're kept away from each other." The coughing returned, more briefly this time, and he blinked the tears from his eyes. "Each donor is told there are just one or two others so far. This small contact is allowed to develop so that said donor's curiosity can be assuaged. These contact links don't overlap, though, so that the whole set-up can't be traced out man by man."

"Well—" Relik hesitated, then went on briskly. "What are you going to do now?"

"I don't know yet—I'll have to figure out a way of protesting that's both effective and honorable."

A wondering smile played about Relik's lips. "If anyone can do it, you're the man." He paused once more. "Grierson, I'm going

to be in New York tonight, seeing that Hawks who rubs you the wrong way so much. I could show him this strange list if you want me to."

"What *would* be the best approach?" He pinched up a peak of flesh on the back of his right hand and watched it slowly subside. Such old flesh, so inelastic! Suddenly, "All right, Relik, that's as good as any." He walked over to the painting and said: "You know, it does sort of grow on you, the way grass should." He placed a slightly quivering finger above one point. "Maybe not a matchstick but it is at least a little twig."

Relik strode to the picture and looked there. "It is some kind of twig! Never noticed that before." He was completely silent as Grierson went out.

[N the morning they both had identical telegrams:

Please arrange attend Safety Disposal Conference Washington this Saturday noon. Presence urgently requested. Report Pentagon SJ1238.
J. P. Hawks

"Must be something to your list after all," Relik conceded. "Hawks didn't say a thing about it but you should have seen how he studied it!"

They flew down to the capitol together on Saturday. The vener-

able Pentagon, long since surrendered to the North American Department of Science, was bigger than ever but there was no problem in finding SJ1238. Hawks greeted them there and, business-like as ever, sent them on to a Secret Conference Chamber left over from General Staff days. A half-dozen men, all very old, were already gathered there and Grierson recognized several of them from photographs he had seen as scientists on his little list. Relik seemed to know everyone there and stopped to chat with several of them, paying particular attention to a centenarian who sat, continually quivering chin into chest, in a wheelchair near the head of the conference circle. It was Robinson, the noted econometrist. Second-rate kind of field, Grierson muttered grumpily.

By the time Relik sat down next to him more men had entered, all of them alertly bright-eyed despite their varying degrees of antiquity. Then President-Minister Weller came in, accompanied by Jellicoe, the Secretary of Science. Political functionary duplicates of Hawks. Grierson decided, more august but same poker-faced expressions, same impersonal suitings. They were followed at a respectful distance by Hawks and Hasbrouck.

Weller remained standing as

the others took their places. "Gentlemen," he said, "this is the first time we meet as an organized body. It was our hope in the Executive Branch to avoid this stage for another few years because of the social problems threatened by Symbiotic Computation, but our hand has been forced and perhaps it will work out as well this way. Appropriately enough, the thirteenth volunteer was the one to upset our schedule." He went into a step-by-step accounting of Grierson's unraveling process, concluding, "And so, even if his list was not correct in every single case, it was so surprisingly uncanny that we felt this meeting should occur as soon as possible. You see, Dr. Grierson feels there's a 'sinister' side to this, not on the sophomoric basis of anatomical fear but—well, I'm not quite sure what is the basis for that assertion."

All faces were turned to him now, some questioning, a few nodding silent agreement, and, in Robinson's case, crimsonly angry. "I might be able to clarify my use of that word now," Grierson said. "Theoretical mathematics is the queen of the sciences—"

"Bah! Most exaggerated concept I know of," said Robinson, his voice surprisingly clear and firm. "Sure, it's important but not *that* important."

Just what he was afraid of—someone like a mere econometrist trying to take things over! But before he could answer, the President pounded for quiet and said: “As was to be expected, the meeting has started to turn to technical matters so I think the chair should pass to the scientist who first developed the Symbiotic Computation concept.”

Grierson gasped as Relik got up. “Well, that at least was one thing you didn’t guess after all,” said Relik. “I thought you had.”

He went to the head of the table and waited for the hubbub to die down. “A little history is in order,” he began, “in the interest of that objectivity which I will maintain against all lesser special pleading here. Four years ago I came to the President with my idea and he immediately pointed out the dangerous social implications of the transition period before Symbiotic really went into high gear. Danger of demands for its destruction as well as even more serious pressures for inclusion by people who, while influential, would not fit into it usefully during the early phase. We decided then that secrecy was essential for as long as possible. Now, with your cooperation we hope to maintain that secrecy until at least three more cortexes are in coordinated operation. There are eleven of us here and in the months ahead

there will be several more recruits. The time has come to air any grievances so we can move forward, secure in our expectations.

“Here is one vital point for your consideration. Symbiotic can give us total solutions to many great problems and more complete partial ones to many others than any one brain could develop. But the major part of the battle for knowledge will always be knowing how to pose the right questions. Only an individual brain in an individual body can formulate such questions. What I ask of you is that you devote a major part of your future thinking to formulating questions, making speculative leaps that can program Symbiotic as it grows.”

THEY were all nodding their agreement. “Right up my alley,” said Tomkins, an austere-looking man. “I’m a philosopher—incidentally, Dr. Grierson, you didn’t seem to see a place for philosophers on your list.”

“Because you’re not really scientists,” Grierson retorted.

“A dubious distinction, sir. As I was going to say, speculation is right up the philosopher’s alley. I can supply the major part of the initial questions for processing by Symbiotic.”

“No!” “Ridiculous!” Everybody seemed to be shouting.

Smiling to himself, Tomkins permitted the tide of protest to swell, then ebb away. "The most important question would be getting closer to a solution for the mind-body problem. Are mind and matter the same or separate? Is mind the ultimate stuff of the universe or matter? That's the sort of thing philosophy can develop."

"Fat lot of good it's ever done in solving that phony question," fumed Ryan, the psychologist.

Grierson rose unsteadily and waved indignantly at both of them. "Obviously there are questions in mathematics that, for practical reasons, take precedence over everything else."

"No!" "Ridiculous!" Again a wave of protest swept the hall.

But Grierson did not wait for silence to return. "Here we're closer to the heart of what I found sinister in this set-up. As I understand Symbiotic's workings, it can accomplish miracles but not instantaneously. It is fed a problem, permitted to work it for a while, then a second, unrelated problem is fed in so more varied use may be made of the computer. After a while the first problem findings are re-cycled, then the second, then one or two others may be introduced. But, because it will be devoted to such vast, ultimate questions, there's a definite limit as to how much it can handle even over an extended

period of time. This will be true at least until many dozen cortexes are working in tandem. Thus the basic problem for us is one of priorities and we certainly don't want that decided by political functionaries, do we?"

"Certainly not!"

"Then, since you're supplying the basis for this project," President Weller said calmly, "you should decide the priorities among yourselves."

"It's vital that econometrics come first," said Robinson. "I see many of you smiling, ready to say, How can such a backwater of science make this priority claim? How arrogant and unobjective. But consider, gentlemen, knowledge flourishes best in a society making the best, the fullest use of its resources, and here my discipline points the way. Once its problems are solved, many others can readily be handled."

He went on and on elaborating its problems but after the first few minutes the attention of the others started to wander as he became increasingly technical. Then Ryan took up the challenge at equal length, showing that psychology was the crucial area to assure the growth of the others. Again interest waned as technicalities waxed.

Discipline followed discipline until only Relik was left to speak. They waited, eager to hear some way out of the deadlock from

him. Instead he said, "I promised objectivity and objectivity's what you're going to get. Only the central discipline of biology can overcome this stalemate and neurology is the central discipline within biology." The others groaned as he went on.

FOR several minutes the President-Minister had been conferring in the background with Jellicoe and Hawks. Now he stepped forward and said, "There's an obvious need for a break, gentlemen, lest this deadlock go on indefinitely. Down the corridor from this hall there is a group of private chambers. I would like to suggest that you all retire to separate ones and concentrate on the objective circumstances. Perhaps someone will arrive at an honorable answer that way."

They all seconded the suggestion and headed with much creaking of aging bones, to their separate contemplation chambers. In the one that fell to him, Grierson abstractedly followed tactical lines on a framed battle-map, a leftover from the Final War, and thought of the injustice of all things. Man's greatest leap forward about to be made but still no justice. If the Symbiotic, however, would be slated first for general solutions of the 5- and 6- and 7-body problems and on into General Field solutions. If—

When they gathered back in the conference hall, each man had found new reasons for supporting his old contentions and the stalemate was total.

This time the three functionaries conferred with Relik. At first he answered in sibilant whispers of annoyance but then a sad smile spread across his face and he gave an affirmative nod. He stepped back to the table and announced: "Gentlemen: the President would like to make a suggestion. I find it somewhat disappointing to my own expectations but do accept it as inevitable."

"You have always complained, and I must say with much justice," began Weller, "that politicians should not intrude in science. But for the past few hours we have seen politics rear its ugly head *within* your ranks. Permit me to suggest then that there is only one thing that can solve this problem of priorities—death." He waited while the room fell completely silent. "As each man dies, *his* questions should be fed into Symbiotic. No one wants to die and no one is going to want to even among those of you most impatient for important questions to be answered. Why? Because each of you will want to formulate as many and as meaningful questions as you can. The quality of a man's life is in the questions he has asked. If he is

cut short in that endeavor, he will have the priority right as a great consolation."

Grierson hesitated. "It is the best way out, I suppose. My only objection is that it isn't really logical from the viewpoint I have elaborated. Knowledge has always grown in such an uneven way and I thought my proposal would assure a more logical future."

"I wonder if we can logically shape the future. Chance does that, not political functionaries or scientists, and this will have to be left to chance. The one thing we can try to do is try to shape it justly—and I think there will be justice in this procedure."

"I agree," said Grierson, turning from Weller to his fellows.

As the last seconding vote was sounded the eleven men looked at each other with a strange, new

affection that could find no words. Then, after a while, a few finally started to their feet and the rest slowly followed suit. Robinson motored his chair over to Grierson and gave him a mischievous, boyish smile through his finely-crinkled skin. "Looks as if I might get there ahead of you," he said, gently and without sarcasm.

Grierson stared at the centenarian's gnarled wrist where an artery pulsed with desperate determination. "Never can tell," he said, "many a good man gets to a hundred and twenty these days."

"True enough, young man."

Grierson glanced down at his own wrist and there, too, a thick twist of inner flesh was bravely pumping away. "The most interesting question of all," he smiled, "but I don't think we'll be able to send back any answers even when we do get to the other side."

THE END



If you've recently changed your address, or plan to in the near future, be sure to notify us at once. We'll make the necessary changes on your mailing plate, and see to it that your subscription continues without interruption. Right now—print the information requested in the spaces at the right and mail it to: FANTASTIC, 434 So. Wabash Ave., Chicago 5, Illinois.

Name *Please PRINT!*

Account No.

Old Address

City

State

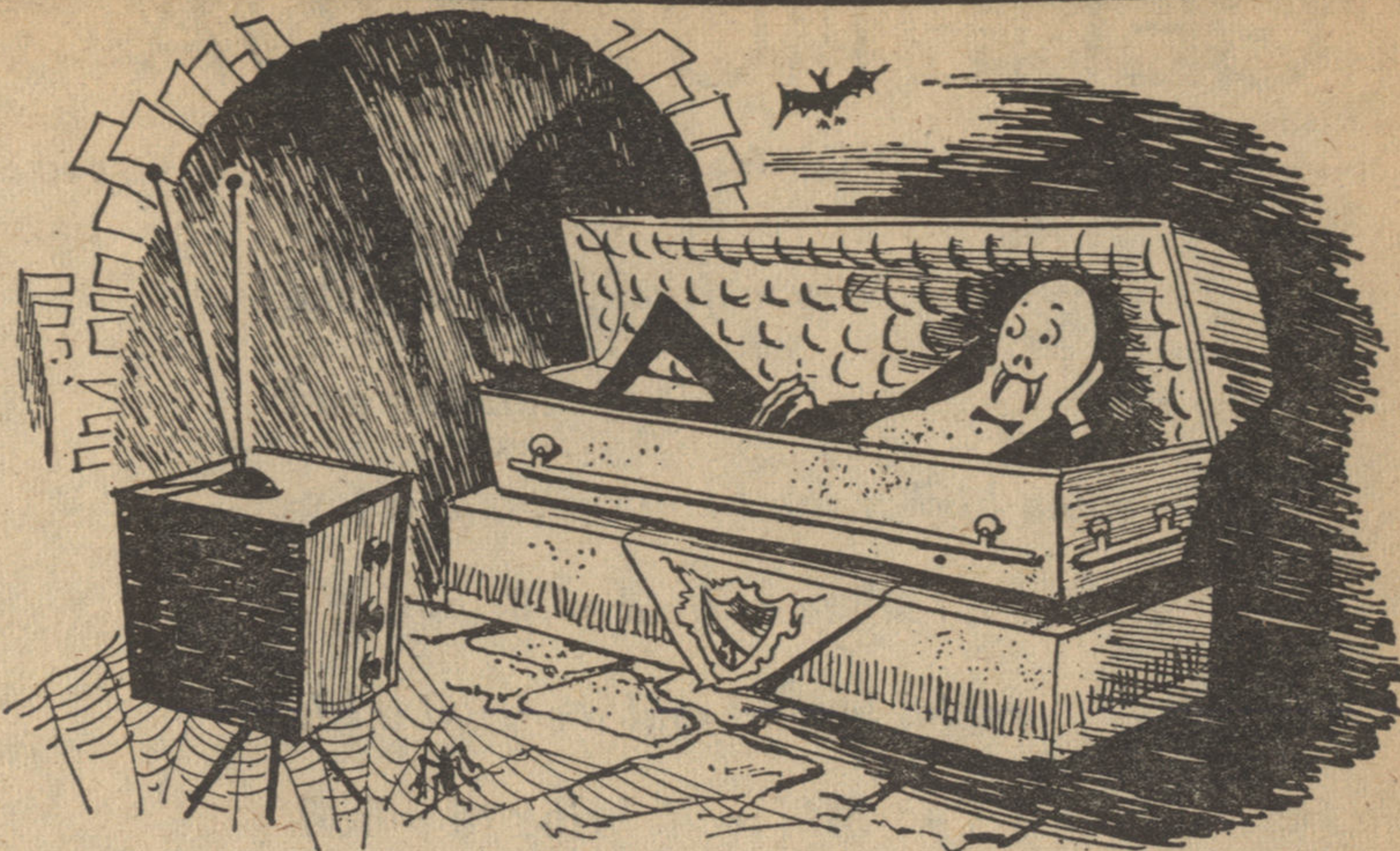
New Address

City

Zone

State

Mail copies to new address starting with issue.
* (Your Account Number appears directly above your name on the mailing label.)



"And now—good news for those who can't brush after every meal..."

AND GOOD NEWS FOR YOU, TOO—IN EVERY SPINE-CHILLING ISSUE OF STORIES OF IMAGINATION FANTASTIC!

Run the terrifying gamut from shiver to shriek. Meet the most fantastic coterie of ghouls, werewolves, vampyres, warlocks, witches and slinking things ever seen this side of the River Styx! Prowl the noisome crypts that yield up one mind-shattering horror after another. Offer up a Black Mass at the Sabbat to end all Sabbats!

FANTASTIC gives you FRITZ LEIBER, KEITH LAUMER, JACK SHARKEY, ROBERT F. YOUNG, J. G. BALLARD! Plus reprinted classics from the pens of such greats as H. P. LOVECRAFT and ROBERT E. ("CONAN") HOWARD. FANTASTIC! The only place where gentlemen prefer blondes...cut up in little pieces. Subscribe now and save.

12 eerie months of **FANTASTIC** only **\$2.99**

The regular subscription rate is \$4.00—but forget that. The newsstand price is all of \$6.00—but forget that, too! *You* save up to \$3.01...and get each issue *days sooner*. A bargain? Of corpse!

CLIP AND MAIL THIS MONEY-SAVING COUPON TODAY.

- YES, send me 12 months of FANTASTIC, and bill me later for only \$2.99 (newsstand value, \$6.00).
- Or, my payment of \$2.99 enclosed now.

Name _____

Address _____ 1-1006

City _____ State _____ Zip-code _____

(Add 50¢ per year additional postage for Canada and Pan American countries; add \$1 per year extra for all other foreign orders.)

EXTRA SAVING!
24 issues only
\$5.75

- Bill me later
- My payment enclosed now

MAIL TO: FANTASTIC/434 So. Wabash Ave./Chicago, Illinois 60605

GENETIC CODA

By THOMAS M. DISCH

*Take one freak, four robots,
a bit of alchemy and
some higher mathematics, add a few
runes and some offbeat philosophy, a
racial legend and a sexual wish.*

Mix well, bring to a boil.

AT the age of six years, five months, eighteen days, Sextus, possessed even then of an analytical frame of mind, noted down in his diary all observable differences between his two parents: Mother and Father.

“Visual: Father, one large bump on his back (like my own), seated, in dark woolens; Mother, two symmetrically-disposed bumps on her chest, generally prone, in sheer synthetic fabrics

“Audio: Father, soft though somewhat rasping voice; Mother, louder and equally rasping voice. Abusive language, for instance—“You goddam, ugly freak, freak, freak, freak, freak . . .” and so on till she tires

“Olfactory: Father, no evidences; Mother, gin, cologne, cinnamon

“Tactile: ?

“General comments: Father, apparently of intelligence equal to mine but uncommunicative; Mother, stupid and highly communicative until just recently, when she passed away from liver malfunction.”

Apart from his parents, Sextus' acquaintances numbered four: Language Arts, Physical Sciences, Social Sciences, and Britannica (including the Humanities). They were robots. Each robot tutored him for two hours every day. Sextus knew he was precocious in comparison to the mean Britannica performance of other seven-year-olds, but the robots did not seem to consider him in any way remarkable.

“Correct,” Physical Sciences would click, noncommittally. Or, “Incorrect. Let us return to

(click) Proposition 84, (click) No. 13 (click) Class Mastigophora—one or more flagella; Subclass Phytomastigina—with chlorophyll; Order Chrysomas-tadida—yellow to brown, rarely blue-green” And so on. Sextus seldom forgot anything twice. It was boring to return to the same propositions.

Shortly after Mother’s death, Father called Sextus into the great, aluminum-panelled room, which Sextus had never known him to leave. There was another human there with his father, totally bumpless.

“Sextus,” Father said, “this is Mr. Sterling. He is going to be your lawyer.”

“Do I need a lawyer?”

“You certainly do, young man,” Mr. Sterling said with a characteristic giggle.

“Why?”

“Because you’re a freak.”

His Father then explained what happened to freaks in a genetically controlled society.

“But I presume it didn’t happen to you, Father,” Sextus interrupted. A liberty he was not allowed by his four tutors.

“No. And Mr. Sterling is here to see that it won’t happen to you, either.”

Freaks are castrated.

THAT was the last occasion (they had never been frequent) on which Sextus saw his

father. Mr. Sterling was in charge of the estate until Sextus came of age.

“Why do you go to so much trouble for me, Mr. Sterling?” Sextus asked one day.

“Because you’re worth millions, Sexy.” Mr. Sterling loved money more than he hated freaks. He was a liberal in the old style.

Sextus hoped Father would return someday. He had liked his Father, who lived (if that was the case) under sentence of death. The World Genetic Council had, for certain considerations provided by Mr. Sterling, relented in Sextus’ case and agreed to let him retain his manhood at the cost of perpetual solitary confinement in the great stone mansion where he had been born and raised. Sextus had felt his parents’ absence as a deprivation; now he was not even allowed Mr. Sterling’s monthly visits.

“I would like a friend,” he said after one of his lessons with Brittanica.

“Click,” Brittanica clicked. “The Oxford Dictionary of Quotations. (click) Arnold, Matthew (1822-88) (click):

With close lipp’d Patience for our only friend,

Sad Patience, too near neighbor to Despair.

(click) *The Scholar-Gipsy* 1.194”

“Even a pet—” Sextus sighed.

“Click. Ibid. (click) Eliot, George (1819-80) (click): ‘Animals are such agreeable friends—they ask no questions, they pass no criticisms.’ (click) *Mr. Gilfil’s Love-Story*. Chapter 7”

Sextus did not have pets, but Physical Sciences provided him with a number of laboratory animals. Annelids first; then the many classes of Arthropoda—crustaceans, arachnids, and insects; at last the Chordates: fish, amphibians, reptiles, birds . . . and mammals. On the day that Sextus reached Proposition 586 (“Mammalia—animals characterized by warm blood and hairy vestiture. The young of most species develop in the body of the mother and are nourished by the secretions of special mammary glands. Etc.”), he was overwhelmed with a feeling of pride and belonging. This was true because he, Sextus, was a mammal, too.

Sextus felt for the first time—he was now eleven years old—the tender excitements of his animal nature. Sextus examined himself in the light of his new knowledge and discovered many qualities which he shared with the other mammals. In addition, Sextus had his own unique quality: Sadly, he was a freak.

Because he was a freak, he was forbidden to assert his animal nature. Guards hired by the World Genetic Council and paid

by Sextus patrolled the cyclone fence that circled his property. No one entered, and Sextus never left. All intercourse between these separate worlds was conducted by service robots. Animality is not easily expressible in solitude.

SEXTUS read about the act of love in many books. He interrogated Physical Sciences, Social Sciences, Britannica, and even Language Arts, who had some choice words on this subject. He was always amazed to discover that the essential nature of sexual passion was not understood. Love is an opportunity to reproduce. In this, men are little better than the bifurcating amoebas that Sextus observed in his Mannerhaven microscope. Rather worse even, for the amoeba needs no partner to fulfill his passions. Sextus did.

Sextus began to study very hard when he realized this. No more dawdling in the kindergarten for him. He had an ambition. He studied metaphysics, mathematics, astronomy, physics, chemistry, biology, biophysics, biochemistry, psychology, sociology, economics, and political science; even, for a short while, alchemy. The only subject he scanted was genetics. Genetics he found distasteful; he regarded Gregore Mendel as a personal enemy.

UPON reaching his majority, Sextus received an unexpected televisit from Mr. Sterling, who informed him that he would now have to look after his own financial affairs. The money that his father had left in trust for him had been exhausted.

"And my allowance?"

"That's stopped, now that you're of age. Happy birthday, Sexy." The screen went blank.

Sextus called his four tutors to him and informed them of his misfortune.

"I shall have to sell you, I am afraid. You served me well, friends of my youth. You have been both Mother and Father to me. . . ."

Language Arts whirred. "Don't sell us, Master Sextus. We're old models, we are. Even on trade-in you couldn't get very much for us. Nobody's buying anything but Hypnopaedists nowadays—that's what the delivery robots say."

"I'll learn to cook," Physical Sciences added. "We can grow our own laboratory animals."

"Happy Birthday, Sextus" Brittanica ejaculated. "This is a recorded message. . . ."

"Father!" Sextus cried out joyfully.

". . . Go the laundry room in the sub-basement. A sliding panel behind the clothes dryer opens onto a secret chamber. There is a birthday present for you." Brit-

tanica concluded this message with a low, mechanical crepitation.

Sextus ran downstairs to the laundry room, entered the secret chamber, and found his birthday present: several bales of hundred and thousand dollar bills. It was just what he wanted.

Sextus was now an adult and ready to strike out on his own. He added several stories to his father's mansion and filled them with carloads of laboratory equipment. He bought an army of robots to carry on the experiments he planned. He rehired Mr. Sterling, whom he located vacationing in the Swiss Alps at a chalet he had recently purchased, and provided him with fresh funds for bribing the World Genetic Council.

Flushed with a sense of power, he collaborated with Language Arts on a novel celebrating the virtues of tolerance. He told, in affecting terms, how prejudice and intolerance poison the lives of their undeserving victims. He pointed out that a too-strict genetic code often led to a waste of national resources. The novel was rejected by twelve publishers before Sextus thought of buying his own printer. Sextus added a thirty-eighth floor to the mansion to house the remaindered copies.

Sextus was not a genius, but he was thorough. Disappointed

with the reception of his novel, Sextus used more direct means of social reform. By manipulating his enormous wealth, Sextus induced a world-wide inflation of unprecedented magnitude. Sextus' own holdings in business and industry increased exponentially, while, in the economy-at-large, monetary values had so depreciated that panhandlers were asking for hundred dollar bills to buy a cup of coffee. Sextus now brought out his novel in a paperback edition for the edification of a chastened people, but he was unable to alter the stubborn attitudes of the geneticist majority. In a fury of pique, Sextus added a thirty-ninth floor and disassembled Social Sciences (who had engineered the inflation) and wired his memory banks to Physical Sciences. He spared Language Arts, convinced that future generations would come to recognize the value of their novel.

Sextus' monomania had become an obsession. He was determined to reproduce. He considered evolving artificial life, but after two years' labor had resulted in nothing more advanced than a new species of slime mold, he abandoned that project. His occult researches yielded a few spells for wheat rust, but not the shadow of a succubus. Sextus was desperate. He was twenty-four years old and he had

achieved nothing. He hobbled past the files of robots in his laboratories and circled the electric fence about the mansion in an agony of self-hatred. He bought a warehouse of Venetian mirrors and shattered them with his fists.

"Why have I cultivated the germ of desire in myself these many years?" he would soliloquize, staring at his bleeding hands. "Why have I cherished the memory and *image* of the one woman it has been my fortune to know, if all those painful exercises are to be fruitless?"

For, during all these years, it had been the image of his Mother with which Sextus had fed his great ambition, savoring and refining upon each memory and fantasy he could cull from the gin-scented musk of childhood.

A huge cornucopia of a woman, her paste-white face drooping with wreaths of fat, which curled in paroxysms of hate or sagged stuporously whenever Sextus had seen her. Her eyes had been blue, like Sextus' own. She had been very beautiful. Not a freak.

Once, before its disassemblage, Sextus had confided his peculiar passion to Social Sciences. The robot, in answer, quoted from *The Interpretation of Dreams*, Chapter 5: "(click) It may be that we were all destined to direct our first sexual

impulses toward our mothers, and our first impulses of hatred and violence toward our fathers; our dreams convince us that we were. King Oedipus, who slew his father Laius and wedded his mother Jocasta, is nothing more or less than a wish-fulfillment—the fulfillment of the wish of our childhood.”

The knowledge that his condition, far from being exceptional, was common to all men, had cheered Sextus immensely. “I guess I’m not so bad off, after all,” he had said, slapping Social Sciences good-naturedly on his OFF button—a fatal action, for Social Sciences was thereby prevented from concluding his quotation: “But we, more fortunate than he, in so far as we have not become psychoneurotics, have since our childhood succeeded in withdrawing our sexual impulses from our mothers, and in forgetting our jealousy of our fathers. We recoil from the person for whom this primitive wish of our childhood has been fulfilled with all the force of the repression which these wishes have undergone in our minds since childhood.”

Thus it was that Sextus had come to regard himself as a representative of the human condition. It is a common failing among men.

Time crept and time scurried, and Sextus, engaged in the

widest diversity of projects, had accomplished nothing whatever. The presiding genius of the house, his Father, did not reappear bodily, but month after month Sextus would discover his notes about the mansion in obvious places, his jottings scribbled on the aluminum walls of his study, his tape recordings mumbling from the speakers in the laboratory. Sextus accepted these intimations without questioning or understanding them. He learned, for instance, that his father’s name was Quintus—a significant fact surely, suggesting a sort of family tradition, a genealogy. But the essential fact that Quintus sought to communicate always escaped him.

HE was thirty years old.

“Ah,” said Sextus mournfully to his old friend and tutor, Brittanica, “Time! How it hurries past us!”

“Clack,” Brittanica clicked (for he, too, was getting old). “The Oxford Dictionary of Quotations. (clack) Longfellow, Henry Wadsworth (1807-82) (clack):

Art is long, and Time is
fleeting,

And our hearts, though
stout and brave,

Still, like muffled drums, are
beating

Funeral marches to the
grave.

Trust no Future, how'er
pleasant!

Let the dead Past bury its
dead!

Act,—act in the living Pres-
ent!

Heart within, and God
o'erhead!

Lives of great men all re-
mind us

We can make our lives
sublime,

And, departing, leave be-
hind us

Footprints in the sands of
time.

Footprints, that perhaps an-
other,

Sailing o'er life's solemn
main,

A forlorn and shipwrecked
brother,

Seeing, shall take heart
again."

Brittanica concluded his recita-
tion with a low, lewd, recorded
chuckle, a recording, Sextus re-
alized, by his own Father. Quin-
tus.

At last he realized what he had
to do. Why had it taken so long
to recognize the obvious? "A for-
lorn and shipwrecked brother"
indeed!

As soon as Physical Sciences
had ascertained its mathemati-
cal possibility, Sextus began the
construction of a Time Machine.

HEDGED and guarded in the
present, Sextus would be
free in the past. The World Gen-
etic Council had not known, pre-
sumably, the secret of his Fath-
er's mansion (i.e., that it con-
tained uncanceled freaks) until
his Father's forced disappear-
ance when Sextus was six. Sex-
tus understood now where his
Father had disappeared to and
why he had never seemed to age.
He understood how his Father
had guided him through the
years, emerging only long
enough into Sextus' continuum
to leave a note on his desk or
scribble some clue on the wall.

Sextus set the controls of the
time machine—it occupied the
entirety of his Father's old alum-
inum-panelled office—for ten
months before his own birth,
and, after a suitable display of
special effects, he emerged into
the past. The room, of course,
looked the same, but Sextus
knew that thirty-three years had
elapsed by consulting the chro-
nometer on his wrist.

Sextus was following in his
father's footsteps, just as Quin-
tus had followed *his* father's
(Quarto's) footsteps, and so on
—to the first of their line, Pri-
mus. This, at least, was Sextus'
theory, and it was not too far
wrong. His father's footsteps
took Sextus outside of his ances-
tral home, around which there
was now no electric fence, no

guards; nothing, in short, but a horizon rich in promises. His heart dilated with the utmost joy, Sextus stepped across the boundaries of the absent fence for the first time in his life.

"If only Brittanica could see me now," he thought. (For of all his tutors, it was Brittanica whom he loved most dearly.)

Into the cruel darkness of the city's night, Sextus made his cautious way. In the brief moment before his catastrophe, we might point out that, in a very real sense, Sextus was the victim of fate: a mere link in a causal chain that had begun long ago; a beginning, paradoxically, coincident in time with this very evening. Tragic fate, like some idiot flywheel, spins on its silly axis endlessly; there is no culmination. Not for a good many revolutions, at least.

Sextus almost stumbled over the woman lying in the gutter, where fate had tossed her, poisoned with alcohol. Roused from her stupor, she rasped a few inchoate words. Sextus did not hear them. He was stunned with the beauty of the scene. Gently, timorously, he raised the fallen woman to her feet and helped her along the sidewalk to his great stone mansion. At some distance from the house, he caught a glimpse of a figure of about his own stature emerging from the doorway, but even as he

looked at it, it popped out of existence. Quintus had been; he was no more. Not in *this* continuum.

The woman groaned uneasily as Sextus deposited her into his Mother's empty bed. Let us modestly avert our eyes from the calamitous scene about to be re-enacted. There are moments which have no place in Art.

SEXTUS woke the next morning to an ear-splitting cry of "You goddam ugly freak, freak, freak, freak, freak. . . ." He thought she would never stop—and she didn't until noon.

He had realized by then who the woman was. In the previous evening's roseate glow of fulfillment, Sextus had not recognized her. After all, he had known no other woman than his Mother, and she did look different now—thinner and younger. He tried to explain to her what had happened, but she was unreasonable; he returned to the future to fetch a bottle of wood alcohol from his laboratory. The woman quieted.

There were many things to keep Sextus occupied in the next few months. He disassembled his three tutors and transported them back to the past, where he reassembled the original four. He was pleased to find that Language Arts had put his time to good use by writing several new

novels on the theme of intolerance. Sextus judged them unpublishable, but good intentions are what count. Then Sextus began to ship back boxes of devaluated currency, in sufficient quantity to stock the secret chamber behind the laundry room in readiness for the day that Septimus came of age. He contacted Mr. Sterling and made clandestine arrangements for Septimus' future. Everything was accomplished in four months. Consumed with impatience, he entered the aluminum-panelled time machine, which he had incorporated into his Father's office (actually, the room had never been anything else), and set the dials ahead five months.

The cries of a new-born babe were ringing through the mansion's dusty corridors when he left the machine. These were followed, at a short interval, by the now familiar battle-cry of "... freak, freak, freak, freak, freak. . . ." Sextus rushed into the bedchamber and took Septimus from the gentle grasp of the midwife-robot.

"Septimus!" he shouted with joy. "My son!"

But it wasn't Septimus.

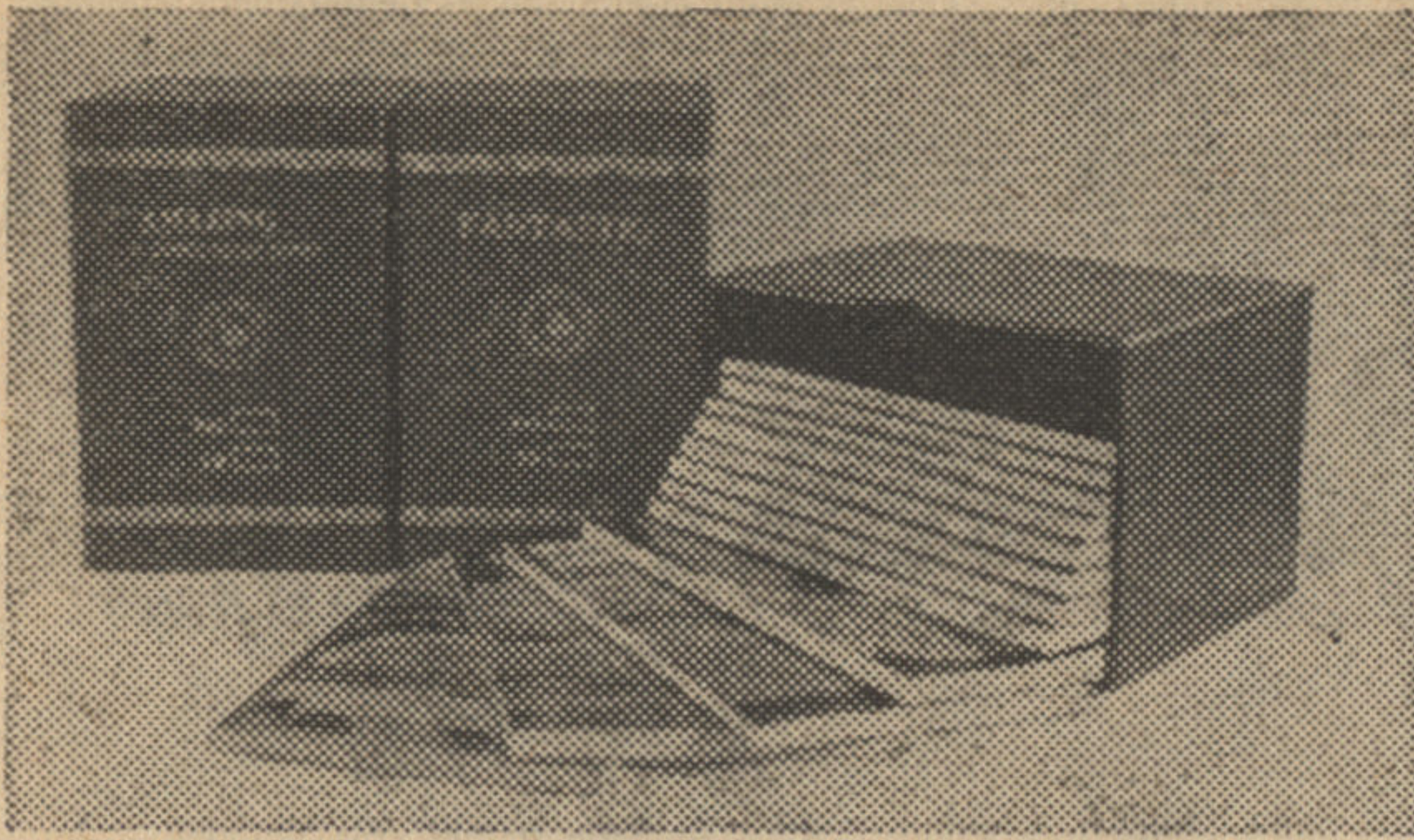
"Septima . . ." he muttered.

He had hoped for genetic alteration, of course, as the ratio of his genes to his wife's decreased from generation to generation: $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$, $\frac{1}{16}$, $\frac{1}{32}$. Never having studied genetics, he did not know of recessive and dominant characteristics. Septima had (or would one day have) three bumps.

Actually, he loved her all the more for this. She showed astonishing intelligence. He was thankful that he had more than one dominant characteristic. Sometime after her sixth birthday, Septima's father, unable to part from her and knowing that, in any case, the flywheel of his fate had stopped its relentless roundabout, carried her away with him into the future, leaving the four reassembled tutors behind to care for Septima's mother. There, in a forty-story mansion, beyond the prying eyes of the World Genetic Council, they shared the happiness of their remaining years with the beautiful twins, Octavia (two bumps, in front) and Octavius (no bumps at all).

But *their* story is beyond the scope of our tale.

THE END



DO YOU SAVE YOUR COPIES OF

STORIES OF IMAGINATION
FANTASTIC?

Make sure they're kept neat and always handy for instant reference—with a handsome file that's designed to hold a full year's copies!

- washable Kivar cover creates a leather-like appearance
- available in maroon backing with black sides or black with maroon
- 24-carat solid gold leaf embossed lettering for magazine's name
- attractively priced at only \$2.95 each, 3 for \$8.00, 6 for \$15.00
- files are shipped to you prepaid and are fully guaranteed

NOTE: these special-quantity prices apply for any combination of titles, so you can have them for all your favorite magazines.

Order several today—for all the Ziff-Davis magazines: Popular Photography, Modern Bride, HiFi/Stereo Review, Electronics World, Popular Electronics, Flying, Car and Driver, Popular Boating, Amazing, and Fantastic, and for your other favorite publications, as well. (Ziff-Davis magazines available in colors of your choice as noted in coupon. Other publications will be shipped in standard colors available.)

Jesse Jones Box Corp., Dept. F, Box 5120
Philadelphia 41, Pa.

Please send me: (Fill in title, quantity and check appropriate column for color desired)

MAGAZINE TITLE	QUANTITY	BLACK BACKING/ MAROON SIDES	MAROON BACKING/ BLACK SIDES
Fantastic	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

\$2.95 each, 3 for \$8.00 or 6 for \$15.00 — shipped prepaid — fully guaranteed

Total amount enclosed _____

Name _____

Address _____

City _____ Zone _____ State _____



From the Beginning

By EANDO BINDER

Introduction by Sam Moskowitz

When From the Beginning was published in the June, 1938 Weird Tales, Eando Binder was already one of the most popular and prolific authors of the period, climbing towards a zenith of acclaim that would be achieved by I, Robot (AMAZING STORIES, Jan., 1939). From the vantage point of hindsight it is easy to see that Binder was building towards that climax in From the Beginning, which presents the robot in not only a favorable aspect but in an almost sacrilegious if benevolent role.

The impression, and an accurate one, that emerges from reading any Binder story is that the man is well versed in every standard science fiction situation and though his props are familiar, his plots are punctuated with strikingly original variations on the theme. Weird Tales ran a monthly poll of reader preference and against the formidable competition of stories by Robert Bloch, Seabury Quinn, H. P. Lovecraft and Henry Kuttner, Binder's story tied for first place with Bloch's Slave of the Flames.

Copyright 1938 by Popular Fiction Publishing Co., Reprinted by permission.

This was no accident. Although most of Binder's work appeared in the science fiction magazines, a previous story in WEIRD TALES (March, 1936), The Crystal Curse, won an unqualified first place and was described by editor Farnsworth Wright as "a symphony in blue".

Binder's interest in science fiction stemmed from the first issue of AMAZING STORIES in 1962. His first story appropriately had a "first" in the title The First Martian, and was published in AMAZING STORIES for October, 1932. Eando Binder was quite literally a dual personality since the early stories were the collaboration of brothers Earl and Otto. The use of the letters of their first names, joined with the conjunction "and" produced the unusual pen name of "Eando" Binder. The collaboration lasted only a few years and all stories since have been written by Otto alone.

The family was unusaully talented. Another brother, Jack

Binder, was an artist whose work, predominantly black and white interiors appeared in the science fiction magazines during the late thirties and early forties. He followed Otto into the comic magazines at the outbreak of World War II and his work was much in evidence there.

In recent times Binder created a new reputation as editor with the establishment of SPACE WORLD, "the magazine of space news," now being carried on by Raymond A. Palmer. Presently a series of books on various aspects of space have occupied Binder, who has combined a knack for popularization of science with a scrupulous respect of accuracy and research. His latest book from Walker and Co., Careers in Space (\$6.50) is the first survey ever published on opportunities for jobs in the mammoth new space industry, outlining for high school and college students just what requirements are necessary to qualify.

MY companion in this tale, William Walker, helped me with the writing of certain episodes. I had come to his place in answer to a phone call. I sat down and looked at him quizzically, wrinkling my nose at the smell of ozone which was always in evidence in his small electrical workshop.

"Look," he said, leaning for-

ward when our greetings were done. "What is it when mind speaks to mind without use of words?"

"Telepathy."

He nodded and waved a hand to indicate the apparatus on the work-bench before us. To my untrained eye it was just a group of adjacent coils sleeved inside one that was two feet high. The wire

had been wound around cellulose cylinders. Beyond the clear walls of the inner coil, partially hidden by the turns of wire, was a three-inch metal ball, perfectly spherical, suspended in a cradle of leather strips.

"Well?" I raised my eyebrows.

"I don't know how to begin," frowned Walker. "I'm only an amateur scientist, and as such can't figure out at all why it works as it does. But I doubt if our science can explain at all. I do know this—when that metal ball is subjected to high-frequency energy, it releases thought-waves! It must have some inexplicable mechanism inside that does the trick."

"You might tell me what it is and where it came from," I suggested, utterly mystified.

Walker lit a cigarette. "You remember," he began, "that I went with the French LeConte Expedition last year which surveyed for possible irrigation of the Sahara Desert by canals dug down from the Mediterranean. And out there, in the middle of nowhere, we came across a batch of fossil bones in our digging to test underlying soil.

"Micolet, the little French fossil man, went crazy for joy. He dug up some of the precious bones and found this metal ball. We two happened to be alone at the time, and he gave it to me. It had no significance to him—only

his musty bones did. I slipped it into my personal belongings, later calling it a paperweight at the customs.

"I was intrigued with the thought of this smooth metal sphere, uncorroded and showing no sign of age, having been embedded in the same clay-matrix that held the petrified bones of an extinct reptile—so Micolet said. And he's a pretty well-known paleontologist.

"After my return to the States, I began wondering about the thing. At first I was more interested in *what* it was than how it got there among fossils. I analyzed the metal; it is a strange alloy of beryllium and tantalum, two very resistant metals. A density measurement showed it was too light to be solid all through. But what, if anything, was inside? I thought of several ways to find out—dissolving the outer shell away, X-rays, even sawing into it. But one day, quite by accident, I had it near the Tesla coil, and as I turned on the current I got the shock of my life when a soundless voice seemed to hammer into my brain!

"Different sets of thought-waves are released when I change the frequency of my inductive field—almost as if it were a series of phonograph records that give off thought and vision instead of sound."

"Whose thoughts?"

"Those of someone, or something, living in a past so remote that it precedes human history!"

"Atlantis, maybe?"

"Maybe. Maybe from a time before the species of *homo Sapiens* even existed!" Walker was in grim earnest, I can tell you that.

YOU see," he went on, "I shan't know just how old the ball is until Micolet determines the age of his fossils, which he hasn't done yet. The thought-record itself gives no clue. If it happens to go back as far as 25,000 years —"

"Preposterous!" was my involuntary remark. Walker, I might explain, was, and still is for that matter, a believer in psychic and supermundane things, whereas I'm from Missouri.

Walker didn't seem to hear me. "The thoughts released are not very coherent," he pursued. "Either that or my mind isn't capable of translating them. It is not a voice, but a swift series of mental images combined with sound and thought, so detailed that they give every variation of what seems to be an elaborate story. But it doesn't seem to have any coherence or logic or—perspective. So I have you here on the hunch that with *both* of us listening at once, the images will be clearer."

"Huh—why?"

Walker smiled a little sheepishly. "Well, my theory is that two minds give perspective to thought-waves. It takes two ears to orientate sound, two eyes to judge distance, why not two minds to translate telepathized thought-imagery?"

With a strange look on his sensitive face, Walker eagerly arranged two chairs in front of the apparatus, explaining that our heads—our brains—had to be fairly close to the metal ball to catch its radiations. He then knifed a switch from which insulated wires ran to a large high-voltage transformer in the room's corner. A low moan arose. Then, when we had seated ourselves with the three-inch ball just in front of our noses, visible beyond the clear cellulose, Walker snapped a switch that led current through his primary.

I had waited expectantly, hardly knowing what to expect. I jumped as a pulse seemed to beat in my brain.

"That's just a sort of carrier-wave," whispered my companion. "It's much stronger than it was when I listened alone. I think this is going to work out—"

The pulse in my brain quickened to a drone and then—so suddenly that it drew a sharp gasp into my lungs—it became a clear-cut picture. I saw a monstrous angular shape with four legs and six tentacles, following

a short line of such similar beings. Overhead a fierce blue-white sun poured down a flood of rays that reflected blazingly from the metallic figure of the creature. The scene around was one of barren desert. Beyond near the horizon, lay a confused heap of incredible architecture, sharply outlined against a deep azure sky.

With this picture came sound—the smooth whirring of well-oiled machinery. And after sound came something more—an almost complete *rapport* with another mind.

HE was the last in the line. Six million and more of the metal-bodied, mineral-brained creatures had preceded him. The brain-units of each of them had been destroyed after the precious capsule of activating radium had been removed. The radium was to be added to the stores aboard the space-ship.

Tumilten saw them open the hinged receptacle in the head of the robot in front of him, take out the small radium-phial, and then reduce the brain-unit to a molten blob with a sharp ray of heat. He shuddered mentally. That was death! A sudden erasure almost unknown among his people, except at rare times like this. Ordinarily one lived on and on, for thousands of years, till the final last “fading out,” when

the brain-unit had burned itself completely out with radium.

The operator of the heat ray turned his multiple eyes on Tumilten. He telepathized, “Come, you. You are the last.”

No sympathy, no slightest spark of feeling. The operator had been ordered by the Council to destroy six million brain-units, and there could be no such thing as pity for those doomed. The thing the Council had stressed was that they be sure to retrieve every radium-capsule before using the heat ray.

Tumilten took one step forward, then two backward. The operator looked at him with what might have been surprise.

“Tumilten does not want to be rayed out!” said Tumilten.

“What nonsense is this?” returned the operator. “The Council commands it. You have the cross-mark of the Unchosen on your frontlet. Come here and be rayed.”

Tumilten spoke for himself again: “Why should Tumilten be rayed out? He wants to live!”

“Why? Why?” snapped back the operator impatiently. “Foolish one, because there is a shortage of radium. In that long journey through space in search of a new home, only the Chosen few can be supplied with radium. These six million capsules will help to keep them renewed till they find a haven.”

The telepathized voice seemed to soften a trifle from its metallic indifference. "It is nothing, Younger. A fleeting moment of heat and it is over. You were created and now you are to be uncreated. After you are rayed, the ray will be turned on its operator, who is also of the Unchosen. Come—"

But Tumilten was thinking otherwise. With a click of internal machinery he whirled, and ran; ran with the smooth speed of high-powered machinery. The operator stood for a moment in perplexity, then swung his heat ray toward the escaping robot.

Tumilten, his four triply jointed legs propelling him forward with ponderous velocity, saw the sands around him curl up and cake and run together. The heat ray was on his legs. Pain came to him, not as a physical sensation, but merely as the coded clicking of a thermocouple in his chest. It was warning him that his internal heat was reaching a dangerous point.

But he ran on, even though he knew his fuel tank might at any instant blow up and destroy him. In another moment he had gone beyond the range of the ray and was safe. He stopped then and looked back. He saw the operator stare at him impassively, then quickly raise the ray to his own head.

The operator had carried out

his duty except in one detail. The escape of Tumilten was the exceptional detail.

WE sat spellbound before the metal ball as the thought-images ended abruptly with a faint click and the pulsing carrier wave came into being. Then with a soundless click, the episode we had just witnessed began again.

Walker snapped off the current and lit a cigarette with trembling fingers.

"That was great!" he exclaimed. "Before, trying it alone, it was a meaningless jumble of superimposed impressions to me. But with our two minds—possibly *en rapport* since we were both concentrating on the one thing—we got—well, perspective. Which simply means each of us not only received the thought-message direct, but also by reflection from the other's brain."

That was just like Walker, to be more interested in rationalizing the experience we had just had, than in analyzing the phenomenon. For my part, I must confess I was awed.

"Lord!" I gasped. "It's unbelievable! We were seeing and hearing things long since done"

"Not just seeing and hearing," said Walker, expelling a cloud of smoke to the ceiling. "That was *living* it. But then I always reasoned telepathy should be some-

thing like that. The senses are just imperfect instruments of the brain. Mind-to-mind contact—*this* sort of thing—eliminates the clumsier sensory means of communication. Think of it, Cliff, we've *lived* an episode in some other creature's life!"

I shook my head dazedly. "And what a creature! It wasn't human, Bill. It was a soulless, thinking machine—a robot" I shuddered involuntarily. "How can a wholly mechanical creature think like a human being? Present-day science wouldn't admit of a reasoning robot."

"Present-day science wouldn't admit of hypersensory telepathy either," returned Walker dryly. "Yet there we have it in that metal ball. This whole thing—we've got to make up our minds to it, no matter how fantastic—goes beyond our science. But why be as superstitious as the hardhead who said 'There ain't no such an animal' when seeing the giraffe?"

I had begun pacing the room excitedly, trying to keep from feeling that the whole world of accepted things had fallen out at the bottom. A robot! A thinking machine! Fantastic, ridiculous, impossible. I found myself shaking my head vehemently as though arguing with someone.

"What it is," said Walker soberly, "is an episodic record of the life of a creature whose race

once lived on Earth—totally unsuspected by our present civilization." A yawn escaped his lips. "Come back a few more evenings and we'll run through this whole story. I'm too tired to go on tonight."

THE next evening I went early to Walker's place, eager to get on with our bizarre experiment. I had had one or two qualms through the day that I had dreamed about last night. My humdrum office routine failed to take my mind off the event.

Without preamble, Walker had me sit before the apparatus.

"I've already set the coils for a higher frequency and therefore a different episode," he informed me. "Did you notice that in the last, the whole thing seemed to have been told or narrated by someone? Maybe the series of records leads to some conclusion or denouement."

He knifed a switch. After a phonograph-like period of scratchings, the sudden panorama of mental images again sprang into our minds. I speak for Walker, for we afterward found we both *saw* the identically same things, though our interpretations of what we *heard*—by telepathy, I mean—were always to be slightly at variance.

The scene we seemed to see in front of our eyes was again desert-like. In the foreground were

two of the robot creatures, conversing. Then, as before, sound came to us—the undertone of smooth, intricate machinery. Then came a gradual fusing of minds, till we no longer knew ourselves as William Walker and Cliff Darrell, but identified ourselves completely with an alien mind. . . .

A CLEAR bell-note rang inside the brains of the two conversing robots. Eight times it sounded.

“The eighth period,” said Tumilten. “Tumilten must leave you, Zonzi, to go on duty. You will come here again tomorrow?”

“If there is not other business,” returned the Elder. “Any time now the Ancients Supreme may call a Council of all Elders, in the Hall of the Twelve. When it comes, this Council will last for days. And when it is over, the plans for the great space journey will be completed.”

They separated without any form of good-bye greeting. Tumilten moved his quadrupedal metal body toward the nearby city. Zonzi clambered into his small, ovoid airship and sped silently away. They had met out in the open wastes of the desert because they liked to be alone with each other.

In a few minutes Tumilten had reached the city, which housed only one kind of machinery—that

for making wire. All kinds of wires were made here, cable-thick, filament-thin, of every kind of metal, and even of non-metals, and for all uses conceivable in a completely mechanized civilization.

Tumilten stalked unhurriedly into the bowels of this hissing, thundering Vulcan city, and made his way finally down a corridor crowded with other robots. They were of all sizes and shapes, but all had the same head-pieces. And inside the solidly armored heads, all had the same brain-units.

Tumilten did a number of things that would have bewildered an organic being. In one well-stocked room he removed a small battery from his middle and replaced it with a fresh one. In another chamber he slid open a tiny door in his head and replaced the capsule of radium-salt with another. In another room an attendant removed his tentacles and replaced them with short, strong arms of steel with claws at the ends. Last of all, he poured a thick, creamy oil into cups in his shoulders.

Then, all prepared like an overhauled engine, he passed by means of various moving stairways and elevators to a gigantic room filled with sparkling, hissing, thundering machinery that would have deafened and blinded a carbonaceous creature. For a

moment he stood stock-still, gazing abstractedly at the numerous mechanical figures tending these machines.

When the bell-note struck nine times in his, and in all others' brain-units, he strode on his four triply-jointed legs toward one of the machines. The robot who had been there left as soon as Tumilten had stepped before the control-system with its multitudinous levers and dials.

Then for fifty hours Tumilten tended the machine, unsweating, tireless, his reactions as quick and fresh at the end of that period as at the start. In all this he was no different from all his fellow Youngers in other cities. But in one thing, perhaps, he was different—he had the thoughts of an Elder.

Of an Elder? Perhaps the thoughts of an Ancient. Perhaps, even, thoughts new to their race altogether. For he was wondering where their race had sprung from. Their race had come from another star, it was said. But who or what had created them?

Youngers were created by Elders; these Elders by other Elders; these by others before. But where was the beginning? Who had created the first Younger? All life was creation. Therefore, who had created the first of their race? Had it been, as the legend went—even these machine-creatures had legends—that another

form of life had created them? It was a secret Zonzi knew, but would not give out. It was a secret that Tumilten's super-quickened brain-unit wanted to know.

IT was three work-periods later that Tumilten knew that the Elders had finished their council and had laid their final plans for search of a new home. A click in his brain-unit, and a voice spoke to him in their intricate language which was half in mathematical symbols. It was a command to leave the city of wire-machines and go immediately to the main city of the Elders.

Mechanically, without thought of questioning the strange command, Tumilten went to the city's air-exit, to find himself in company with a hundred other Youngers, all going to the same destination and obeying the same summons. Arriving at their destination, they were immediately set to work on what Tumilten knew was a giant space-ship.

These Youngers at work on the ship, drawn in small groups from every city in their closely clustered community, did not complain when their work-periods were lengthened. Nor was there any explanation. It was not till Youngers had lived for thousands of years that they sought answer to what the Elders and Ancients commanded them to do. And by the time they sought

such answers, they were ready to be made Elders.

And that marked the main fault of these mechanical creatures—a tediously slow evolution of the individual mind.

The giant space-craft was completed in fifteen years. All other preparations had been in the meantime completed, and the day came when the Twelve Ancients, speaking as one, addressed the many millions of Youngers.

“Youngers, our race is to seek a new home in the void,” spoke the Supreme Voice, reaching to every brain-unit by broadcast telepathy. “Unfortunately, due to radium shortage, only a chosen number can leave. All the Elders are of the Chosen, but only one million of the Youngers. Most of you Youngers must be a sacrifice to this great venture. You are to be uncreated, and your brain-units to be destroyed so that we may take along your radium capsules. A white cross-mark will be placed on the frontal plates of those not chosen.”

That was all. A day later Tumilten saw the emissary of the Council pass among the ranks of Youngers, with an instrument that blazoned a white crossmark on certain of them. It was Zonzi himself.

ZONZI raised the instrument as he came to Tumilten.

“You are not of the Chosen,”

FROM THE BEGINNING

he announced, with something akin to sadness in his manner. “The Council chose purely by lot.”

Tumilten, of mixed reactions, said simply: “Tumilten would only wish that before the end he might know of those greater secrets of the past.”

Zonzi extended a tiny square box of metal. “That was anticipated, Tumilten. Since you are to be uncreated so soon, there can be no harm in revealing the past arcara of our race. There are thought-recorded for you here all those things from the Books.”

Tumilten took the tiny machine almost reverently.

Mechanical Elder looked at mechanical Younger. A spark of something unmechanical passed between them; something their hard race had known little of—personal friendship.

Then without further word, Zonzi marked the white cross on the Younger and stepped away. Tumilten watched him blazon the indelible cross on others and gradually move down the line. The Younger looked at the thought-recorder for a moment and then stuffed it into his chest storage space.

WHEN the images had ceased, Walker turned to me after shutting off the current.

“The chronology of these two episodes is reversed,” he said.

"Obviously, the first scene we saw, last night, represented the carrying out of the Council's general slaughter of the Youngers. If I increase the frequency again, I'll get a still earlier episode. I hope so, because it would probably clear up what seems to be rather mysterious goings-on right now. Another half-hundred turns on the secondary ought to do it."

As he prepared to switch in the extra coil—he had previously had a number of them ready for that purpose—I held up a hand. "Wait a minute," I pleaded. "Don't be in such a hurry about it. Let me get my breath."

"Okay," laughed Walker. He could be so calm about such things. A real, honest-to-goodness ghost materializing in his presence would simply send him scampering for a camera and an electroscope. He laughed again.

"Look," he said, displaying the last joint of his little finger with the thumb and forefinger of his other hand. "That's how much mankind knows of the universe. Each little crumb of new knowledge we gather startles us, but if we could once perceive the body of the *All*—our present science would seem like childish puttering."

"You've said that before," I grunted. "But tell me one thing. Where does this robot race fit in the scheme of evolution?"

"Doesn't." Walker was at the window, staring out at the endless stream of traffic. "You know, this has set me thinking on that very thing. Evolution fails to account, in the last analysis, for the quite sudden uprising of intelligence. We have to assume that after Nature had fooled around with various forms of life for a half-billion years, she suddenly came up with a mutation that could reason, evolving in a short fifty or one hundred thousand years. The Survival of the Fittest angle has the paradox in it of saying that *homo* survived not because of, but *in spite of*, intelligence. Because while beetle-browed Neanderthal and equally unfit Heidelberg flourished, brain meant nothing against brawn. The Mutation or Sport theory of accounting for the genus *homo*, on the other hand, doesn't easily explain where the first species *sapiens* found a mate to carry on his particular strain."

"What are you driving at?" I asked impatiently. Walker had a habit of wandering around with words.

He shrugged. "I don't know, myself. Just inner doubts I've had for a long time. But this record of a mechanical creature of at least prehistoric times may give us some startling clues."

"You mean it may have a connection with earthly life?—with man and evolution?" I snorted.

“He’s from some other world—from some utterly alien form of life.”

Little though I knew it, I was right—and wrong, too.

Walker damped his cigarette. “We’ll find out soon enough. We’ll tune in the next ‘recording’ of the metal ball. Whoever or whatever made this thought-record, made it with a purpose in mind, I’m sure of that.”

He knifed a group of switches that cut another coil into his secondary, increasing the frequency of his Tesla field. Then he snapped on the generator and motioned for me to get into place.

I got into my seat with avid eagerness, wondering what further strange things would reveal themselves to us. Walker fed current into his coils. The now familiar hiss of the “carrier” wave came again. A moment later there was the sudden flash of images that carried with them sound and feeling and thought. I don’t know how else to describe the very completeness of our contact in the thought-messages.

In a *rapport* that made us one with the narrator, we became aware of listening to a language of clear, lucid thought, rather than words. Every nuance of expression was understandable, as if the speaker were using the universal tongue of the atoms that compose all things. . . .

WHEN this sun was a younger star,” said the ultra-voice, “and all its planets had been but newly spewed from its seething, white-hot surface by the influence of a passing star, our people came from the outer void.”

Tumilten, of the Youngers, listened eagerly. Zonzi of the Elders was one of the Keepers of History. His knowledge of their people’s past went way back to the dim times when they had lived on the planets of another star. It was his privilege to sit periodically in council with the twelve Ancients; those twelve who had lived on that other world, and whose ages ran into incredible figures. Yet what is time to a creature of metal?

“Housed in a gigantic spaceship,” went on Zonzi, “our predecessors—including of course the Twelve—spanned the enormous void between that other star and this one, and finally landed on the ninth and outmost planet. There our race took up its normal course of existence, finding suitable minerals and materials to make replacement parts for their bodies. In a short time they began creating a group of Youngers to replace those of the Ancients who had faded out during the tremendous journey.

“Yet, though many Youngers were created, it was soon seen that their numbers would never reach the total our race had had

on that other star. For of radium, the life-giving element which gives conscious being to our brain-units, there was a limited supply in this sun system.

"It was debated for a while whether to leave this radium-impooverished system and seek another, richer in this element. But the Elders of that time had had enough of age-long travel through the endless void. They did not relish the idea of again seeking and seeking through space for a sun with planets. For perhaps you know that only one out of 100,000 stars has a family of satellites."

Tumilten nodded. "Why did our race leave its other home?"

"For two reasons," replied Zonzi. "First, because all the available radium had been finally used up. And second, because the parent sun was burning out and becoming dark and cold. And without the energy of a sun to feed its many machines, the race could not thrive.

"Some there were who advocated a harnessing of the terrible power of atomic-energy to replace sun power. But after the awful explosion of an entire planet, with thousands of our people living on it, through the escaping of an atomic-power vortex, the Elders would have no more to do with such a wild, treacherous source of power. No, they must have the safe and gen-

tle sun power, and for that they had to go out in search of a young and hot star with a family of planets."

HARDLY had Zonzi paused when Tumilten came up with another eager question—"But where had our race come from previous to that? Had they come from still another star-family, again leaving a cooled and dying sun for a newer and hotter one? Or is it true—as certain legends go—that our race was created by another, a strangely non-mineral form of intelligent life?"

Zonzi waved two of his prehensile tentacles as if startled, or shocked. "Careful what you say, Tumilten," he admonished.

"But is that true?" persisted the Younger. "Your knowledge as Keeper of History comes from the lore contained in the indelible records of the Books. Surely you have read in those Books of that ultimate beginning of our race?"

Zonzi again twitched his fore-tentacles, this time as if in hesitation of what to say. If his mechanical features had been able to register emotion, he would have looked grave and thoughtful.

Finally he spoke—"There are some things in the Books it is best to leave unheralded. We, the Keepers of History, are under oath not to reveal the greater se-

crets of the past to the Youngers." He waved a tentacle negatively. "No, Tumilten, your question must remain unanswered."

Tumilten knew it was useless to press the point. Close though he and Zonzi were to each other, there was yet a barrier between them—the barrier between all Elders and Youngers. The Youngers were the doers of the race, the runners of machines. The Elders were the thinkers, the ones to guide the greater destiny of the race, in company with the all-wise Ancients.

Tumilten was an anomaly as a Younger. He wanted to plumb the misted past, speculate on the equally misted future. And he wanted to think. . . .

Zonzi gazed at his companion with wonder. What strange spark existed in his brain-unit, so newly formed from cold, unreasoning mineral? He had been created but a thousand years before, and already his brain had become subtle and quickened, as if he had been an Elder of many millennia of existence.

"Well," said Tumilten at length, with a tone that among humans would have been called a sigh. "Go on, Zonzi, with the history of our race since it has been here in this star-family."

FROM the ninth planet," continued Zonzi, "our race gradually worked inward, as the cen-

tral sun slowly cooled through the ages. The eighth planet, then the seventh, and then the sixth. The sixth had no less than ten satellites of its own—tiny bodies that had been ripped from its molten surface during the cataclysmic event that had formed this family of planets. Grandchildren of the sun they were, and three of them yielded large deposits of radium, thus allowing large deposits of radium, thus allowing our race to increase its numbers.

"We Youngers of that time—all Elders now—were privileged to witness one of the grandest sights of all time. It was the formation of the rings of the sixth planet. The nearest planetoid to the mother planet, hovering for long ages on the danger line, finally slipped its slowing orbit too close, and the titanic gravitation of the primary planet tore it into shredded fragments. That was a memorable sight!"

Zonzi paused in memory of it, then went on—"Time moved on, the sun cooled more, and our race moved inward to the fifth planet, the giant of them all, with nine satellites. We took up our abode on one of the planetoids, as the primary itself was too stormy and violent. But on the central planet we found large deposits of radium and we built a huge encampment for its recovery. To ward off the cyclonic, corrosive



storms, we built the great counter-eddy machine, fed by the planet's inner store of heat. It still stands today, although the radium supplies are depleted. And it will stand for future ages, this great Red-spot, site of our giant counter-eddy machine.

FROM the giant fifth planet, led by our race's constant need for the stronger rays of the central sun, we went to the fourth. In going there we passed the belt of asteroids, those broken pieces of a world which mark another vain attempt to harness the demoniac energy of the atom. But a few hundred years before a nameless experimenter had blown himself and an entire planet to bits.

But to go on, our race spread itself over the fourth planet, a small one and almost barren of radium, so that we could only stay long enough to build enormous sluice-ways in which the poor ores could be worked for what little radium there was. These large sluice-ways represent a great engineering achievement. Water from the polar caps was pumped down these enormous canals, and chemicals added which caused the radium to dissolve from the heaps of sand thrown in. Then the radium-rich water was run into great vats at the junctions of the canals, and here worked for the metal itself. A great achievement."

Zonzi curled and uncurled a tentacle before going on—"From

the fourth planet we came to this, the third. And now we are faced with a shortage of radium. All the outer planets have been depleted, this planet is quite radiumless, and its satellite is scarred with our mine shafts seeking the metal.

“Our race, Tumilten, is faced with a crisis—a crisis greater than any other in our history, save one. That other crisis was when that star which was our people’s previous homeland burned dim and our machines began to idle for lack of sun power. Thus our race left its age-old home to seek a new one. But at least they had sufficient radium to renew each and every brain-unit during that frightfully long journey through the void at the speed of light.

IN this present crisis, we shall not have enough. The Elders who have explored the two inner planets for radium found little. Thus, when our final plans have been laid, and the huge ark to carry us through space is built, many brain-units will have to remain—to become uncreated; to become inanimate mineral matter.

“It will be soon now that our race—those chosen—will plunge into the abysm of eternal space, to seek a new homeland among the uncounted stars.”

The strange thought-voice faded away and a click announced the end of that episode. I’ve tried to give what we heard—or absorbed mentally—as we heard it. But I find that our language is simply incapable of expressing the message’s true form. At least the gist of it is there.

Walker and I blinked as though we had awakened from a deep sleep, then stared at each other in a sudden flood of amazement at what we had just heard.

“We can have a gin chaser for that,” I muttered. I ran to the window, gulped in fresh air, and stared quickly around. “Just wanted to make sure Earth was still here,” I added with a lame chuckle.

Walker stood staring at the metal ball in fascination.

“That thing has dynamite in it,” he murmured softly; “mental dynamite—enough to blow up our civilization’s pet belief that mankind is the only reasoning race ever to exist. And look at the mysteries it explains—the rings of Saturn, the Red-spot of Jupiter, the canals of Mars, the craters of the moon!”

“Not to mention the odd scarcity of radium on Earth,” I added.

“I have an idea, though,” continued Walker thoughtfully, “that a bigger surprise is ahead—in the episodes following.

Something relating directly to human life. Have you noticed the speaker—the one who made this record—seems to be telling it from a broadened viewpoint? There are numerous allusions to the abstract, and a general comparing to ‘organic’ or ‘carbonaceous’ life. The narrator is obviously taking an analytical attitude toward the people he is telling about.”

“But *who* is doing the telling?” I wanted to know.

“I think Tuformiltuten himself.”

“Who?” I asked sharply. “Do you mean Tumilten?”

Walker stared at me wide-eyed for a moment, then chuckled.

“All right—Tumilten. Although I got it as Tuformiltuten! The name, if you got it, is simply a number in syllables, one up in the millions, but too condensed for us to figure out. To me it was a word that registered as two-four-million-two-ten. To you it was the slurred Two-million-ten. Anyway, whichever we call him, it is he that is telling the story, because he is analyzing himself more closely than anyone else could, and his viewpoint is from the future.”

“Eh? How do you figure that?” I asked skeptically. “I took it that the record was made as the events happened.”

Walker shook his head. “No, because there are too many ab-

stract tie-ups. In the first episode we saw, Tumilten or Tuformiltuten, called himself a philosopher in a race totally without philosophy—an obvious interpolation from afterthought.”

WELL, it took us ten minutes to straighten that out, because you see I hadn’t got that “only philosopher in a race totally without philosophy” at all. And it turned out that the versions we had heard were somewhat different, although in broad detail they were identical. The versions I have written down are a composite of what both of us got. I will have to admit my versions were skimpier than Walker’s, and I’m free in admitting that his mind is more sensitive, more embracing than mine. Thus he “heard” more.

This leads to the conclusion that the message itself is far more detailed than the human mind can interpret. Either the time-factor is different between the robot’s vision of the events and ours, or his mind is simply more highly organized. I can’t be the judge of that.

Walker went on with his idea, which had become almost an obsession—“Probably Tumilten—if he is truly the narrator—is bringing the series of episodes to some climax; of that I’m almost certain. Taking them in their chronological order, episode one

—the last we saw—gives the history and origin of the robot race. Episode two relates Tumilten's gradual build-up of philosophy—remember it stretches out for fifteen years—from what he had heard from Zonzi. And episode three reveals that Tumilten, in escaping the universal 'uncreating,' is destined to be the last and only robot left on Earth."

Walker has that kind of mind—a keen organ that gropes behind the obvious for hidden mental delicacies.

"Now, what will be the outcome of this?" he almost whispered. "Tumilten, a strange mechanical being able to reason in the abstract, in his possession a record of dark secrets of the past. *What will result!*"

THE next evening I entered Walker's small electrical workshop in a bemused state.

"I say, Bill," I spoke from the doorway, "did we dream what we heard last night? And the night before? This morning when I woke up, and all through the day at the office, I kept wondering if we had really heard anything! You know, when you burned out our coil last night trying to get what would have been episode four, we got a minute of idiotic babbling from the metal ball."

"Yes, it must have a charging unit inside that holds juice for a minute or so."

"Well," I went on, "maybe *all* we heard was that same babbling, and we just imagined we had received an intelligible record! Self-hypnotism, you know."

Walker looked up witheringly. "Come in, you purple skeptic. I'll bet you're a mass of black and blue from pinching yourself."

"Well, it's easier *not* to believe."

Walker snorted. "It was easier not to believe Galileo at first, too. And Darwin, and Einstein, and all the other new ideas that ever jolted this hard-headed old world. You've heard the old saw—"

"Truth is stranger than fiction," I said in chorus with him. "I know," I went on, and I can tell you I was dead serious, "but still maybe the thing's a hoax, a trick that someone devised—"

"And then dug a hole in the middle of the Sahara Desert to bury his gadget, knowing someone by the name of William Walker would come along and—" Walker broke off with a growl. "Enough of that. Come here, now, and let's tune in episode four. After replacing the burned-out coil this morning, I tried to get the messages myself, but no go. It was just a jumble of flat images and twisted thoughts. It takes two minds to co-ordinate the record, as it takes two legs to walk."

A minute later we were seated entranced before the metal ball

which was radiating thought-waves, in some inexplicable way, into our minds. And because the imperfections that are inherent in eyes and ears and spoken words were passed by, we were able to grasp and know things we might never have understood through the five senses.

If only I could find the words to transmit those things faithfully to paper! But there are no such words. . . .

TUMILTEN stood alone, of his race, on Earth!

An hour before he had watched the space-ship bearing all the Elders and Ancients, and one million of the Youngers, lift hissing into the sky and then plunge furiously away. It would be many ages before they would land again on a world—perhaps not till millions of years had gone by. In that time the Ancients would undoubtedly die, and the Elders would become Ancients, and the Youngers, Elders. And if, by some cosmic mischance, they did not find a haven in time, they would die to the last one!

Tumilten's mechanical frame shuddered. Dying—fading out—was so unheard-of a thing among Youngers and Elders. Only the Ancients, those who had lived for almost countless eons, died, with their brain-units completely enervated. They died not for lack of radium, these Ancients, but sim-

ply because the delicate cores of their brain-units had atrophied to mineral dust.

Intricate machines, robots, though they were, these creatures from another star, and as such ageless through constant renewal of worn-out parts—yet they knew death; a long-coming but nevertheless inescapable death, that resulted from the common failing of all things purely mineral—the slow tendency of atoms to disintegrate into the dust of energy. They could renew tentacles, fuel, tiny wires, and all the conglomerate of their mechanical bodies, but they could not renew the pulsing core of their brain-units, which, although protected from all normal disintegrating agencies, could not escape the hand of time—and the falling apart of matter. Radium was but the larger symbol of what happened to *all* matter—a slow disintegration that was almost swift as measured by these long-living machine intelligences.

And in their incredibly long lives, individual evolution was correspondingly slow. As a result, the progress of the race was infinitely slower. And it came to Tumilten, standing there alone, that this was an unforgivable defect of his people. His race, his kind, had existed for a space of time measured by the births and deaths of hoary-old stars. Yet in

that tremendous span of time they had not improved their lot to any extent; had not, for instance, found a way to harness atomic power, or to break from the chains of radium-restricted rejuvenation.

Their science had been a restricted science, dealing only with mechanical improvements of their machine bodies and cities. They had not pierced to the center of the earth, or explored the world of atoms. They had not tabulated the wonders of biological life, or the phenomena of sexual reproduction, or any of the other manifold mysteries of things around them. Even those great projects they had carried out—the canals of planet four, the Red-spot on five—had been but to find radium, to create more Youngers, and more machines. . . .

“Where,” Tumilten asked, “where would there be another life, another race, that would have the ability to burst free the chain of the strictly material, and seek knowledge for its own sake? That would do things for the mere doing? That would even war among itself because of cross purposes that would arise from different and new ideas?”

WHERE was there a form of life that would display its kinship to the general universe by following the law of *change*?

His own robot race, spawned eons before, was long antedated, was a static form of life that had no place in the present cosmos. This was proved alone by the fact that every 1700 years half of any given amount of *all* the radium in the universe changed into lower elements. Their race, dependent on radium for conscious life, was doomed by this mathematical progression of material change.

The law of change!

The day would come when radium would exist, in all the cosmos, in only little specks dotted here and there, and beyond gleaning. And the stars did not manufacture, in their furnace cores, radium any longer, for the balance of distributed energy between matter and space had changed . . . *change!* . . . the immutable law! . . .

Tumilten gave up his speculations suddenly. He kicked at a scurrying rodent that ran by and asked it—“Will this new life come from you? But you have no intelligence; you are just an animated carbonaceous jelly.”

The little beast, attracted perhaps by the bright glint of sun on metal, stopped and sat up on a mound of earth and peered with bright little eyes at the mechanical man.

Looking into its eyes, Tumilten was vaguely stirred.

“And yet, it may be from your

kind after all! I see—I see something of a dawning intelligence behind your visioning orbs. But”—he deprecated then—“will the one who has created you think of creating something *more* than you?”

And Tumilten did not know, at the time, that its creator was not a material being, and that the creator's name was Nature. . . .

WALKER snapped off the circuit as the carrier wave broke into our *rapport* with the thought-images, and gave me a significant look.

I've tried to give, above, as complete a version of the robot's philosophic speculations as he stood alone on Earth as possible, but there were a myriad thoughts—inarticulate ones—that were woven in this episode. Of course we ran through the various episodes several times each, but like a phonograph record, essentially the same message came through every time we heard it.

“We're getting into deeper water right along,” said Walker hoarsely. He was excited. “As I suspected, there's some connection with this record and pre-human history. Don't you sense it, Cliff? I think we can prepare ourselves for some stiff shocks of one kind or another.”

“Haven't we been shocked

enough already?” I grunted. “I don't exactly like this chap's profound intelligence. Makes me feel small and uneducated. I feel as though I had a transparent brain, compared to his, figuratively and literally.”

“That's the odd part of it,” mused Walker. “That he—or it—should know so much about things in general, as if he had ransacked a library. He even hinted at knowing what evolution was, at the last. Yet, as a Younger of his race, untutored except as a mechanic and worker, he could not know those things. Mm,” he went on, “just happened to think—rememembr that little box Zonzi gave him when marking the white cross on his front? That must be his source of knowledge!”

And a few minutes later, the fifth episode confirmed this. It began much like the preceding episode, picturing the robot standing tirelessly, with the large white cross on his torso, and giving his mental ruminations. But one noticeable difference there was—the scenic background was no longer desert but instead luxuriant jungleland, steaming in the sun. And, more startling than that, there stood before the robot a bronzed, naked human being—a man who, despite a scraggly beard and unkempt hair, was obviously *homo sapiens!*

TUMILTEN had traveled. For years he had traveled, the power valves for his metal sinews renewed by a portable machine modeled from the larger ones in cities, which made liquid fuel out of sand by the use of sun-energy. He had crossed jungle and mountain, valley and desert, and had seen everywhere prolific abundance of animal life; life that he understood to be vastly different, in a material way, from his own.

These creatures he saw before they scurried away from his awesome presence were composed of carbonaceous jelly, so soft that he could push a tentacle right through their bodies. The few times he had done this, experimentally, he had been puzzled by the outpouring of a queer, thick red fluid. His alert senses told him that this watery fluid might be, to them, as his own oily fuel was to him—the means of supplying energy to their flimsy bodies.

At first Tumilten had been impatient with these jelly creatures, in his search for intelligent life. It did not occur to him that among their kind might be what he was looking for. He had seen a tremendous variety of them, from tiny, swift balls of fur to giant, thick-hided monsters that trumpeted squealingly at his approach. None of them had indicated signs of the least

rational intelligence. And Tumilten thought that his search was useless.

Only one type of creature, standing one-third his own size and walking erect on two legs, showed a rudimentary intelligence. They inhabited caves, usually in small groups, and used fire. They carried hand-made implements that showed a certain dawning ingenuity of invention. But the thoughts they radiated, which Tumilten caught and read, were simple and dull. They were not far on the road to intellect.

“There,” Tumilten told himself, “is the matrix from which organic evolution, as it obtained in that other star-system which Zonzi’s recordings of the Books tell about, might produce truly reasoning creatures. There is a close analogy between these creatures of two different worlds, except that those who were the creatures of my race were composed of siliceous compounds instead of carbonaceous.

“The question is, when will evolution here on this planet produce a mutation with true intelligence? Perhaps not for ages yet.”

But one day Tumilten had seen one of the erect, two-legged creatures with a curious aura of deliberateness in his manner. And this being, contrary to all other jelly creatures, had not fled, but had stared at him curiously.

When Tumilten had taken a step forward, this being had warily, not precipitately, backed to a large stone, still staring. Once it had lifted a sharp stick, and balanced it for a moment in its hand.

All the while it showed more curiosity than fear, emotions that Tumilten had come to recognize, but not analyze.

INTRIGUED by this strange being, Tumilten had approached very close and read its thoughts. And thereupon Tumilten knew he was facing a mind having at least the capacity of his own, even if of an entirely alien construction.

So it was that Tumilten stood before a man, and knew that his search—that search that had really begun in his mind a half-million years before while he had been among his own race—had ended. Here was life, biologically endless, thoroughly changing environment, with an intellectual capacity beyond plumbing. This was the race that would rise above the material, would develop philosophy, science and thought beyond the limits of its humble birth. It had spawned in the jungle—it would reach to the stars.

Tumilten concentrated his thought, radiated it to the man-being in simple nuances of expression—"Man, are you afraid of Tumilten?"

"Not afraid, but amazed," came back in thought articulation. "I have never seen your like before."

"Tumilten is not a creature like you," returned the robot. "He is of another world—another sphere of the universe."

"You are from the stars?" The Man pointed upward—"From there? But *who* are you?"

"The number is meaningless, but he is Tumilten. He is of that kind of life which came before you. His race is that which could only exist properly before this time in the universe. Your race will inherit the planets his race has ravished of radium."

The Man's mind was befogged at these things. He touched his spear-head, which was of metal. "You are made of this. Are you indestructible, and how long have you lived?"

"Tumilten has lived for thousands of years, and is indestructible to the extent that nothing living can harm him."

What was that curious emotion that came up in the man-creature then? That queer awe and reverence?

"Then you are a—a god!" said the Man.

"God? God? Oh, that is perhaps your thought for robot. Well, if Tumilten is what you call a god, he is the only one, as all the others have left this earth."

"You are The God, then!" said the Man, again with awe. "What is that large white cross on your front—what does that mean?"

Tumilten answered, amazed at the man-creature's insatiable curiosity, and at the same time pleased, for curiosity denoted intelligence. "This cross was emblazoned on Tumilten's frontlet to indicate that he must be destroyed when the Chosen left this world. But, as you see, Tumilten was not destroyed."

"That cross meant you should be—killed?" returned the Man, puzzled. "Yet you are here. You were not killed!"

"Tumilten was not destroyed."

"You are Tumilten, though!"

"Yes, Tumilten is—Tumilten."

THE man-creature frowned. These things were not quite clear to him. At times he looked at the robot with awed eyes. An odd series of thoughts ran through his mind, jumbling up the conceptions of the white cross, god, Tumilten is Tumilten, indestructibility and longevity of the robot.

Tumilten spoke again—"Man, do you know that you are at the beginning of a great race? Since you are the first Tumilten has found in many years of wandering, you shall be called the One-Man. Your mate will be called the One-Woman."

"But I have no mate!" re-

turned the Man, shaking his head dejectedly. "I cannot mate with those shaggy women in the caves—even though my mother was one of them."

"I know you have not found a mate," said Tumilten. "You are a biological sport, a mutation, one that would ordinarily die out unless a similar sport of the other sex is found for you. There must be dozens, perhaps hundreds, of your type on earth, and must have been for years, but the chances of mutations meeting are so small that it might not occur the first time for thousands of years yet. Therefore, Tumilten will search out a mate for you, though it takes years."

"You will find me a mate? A woman as straight of body as I, as hairless, as round of skull?" queried the Man.

"Yes, one who will reproduce with you and give rise to the race that will one day surpass Tumilten and his race tenfold."

The man-creature stared in amazement. "Tumilten is a god!" he cried.

Tumilten, though puzzled, did not try to clear up the mix-up at that time. Later, he was to find it a point on which he and the man, and his mate, could not agree. Nor with the later man-creatures he was to find, and their mates, could he establish a rational basis of understanding as to who and what he was.

There was a peculiar twist in the man-mind that made it idealize more than rationalize. Later progress would either eliminate this quality, or make of it something beyond the scope of a robot mind. One question was ever to recur to Tumilten, yet never quite answer itself—"What is that thought-word 'god'?"

WE—Walker and I—started as though awakening from a dream when the thought-record clicked off there. The above account dissatisfies me. In a way, it records the message that radiated to our brains from the metal ball. But it fails miserably to carry the full import. It is sketchy, even a little ridiculous. I've tried to rewrite it, but each version is as incomplete, as imperfect of the real thing, as this one. So this one will have to stand.

Walker cleared his throat, after snapping off the current.

"That," he jerked out, "is what they call a revelation!"

As for me, I was all in pieces. I was actually panting.

"I—I can't believe it!" I stammered. "It's preposterous! A trick of some kind. Are we supposed to have witnessed a sort of rehearsed play enacted 25,000 years ago? The origin of human life? Adam and Eve, so to speak?"

"Why not?" My friend's eyes

were shining. "We have witnessed the original of the first of all fables—that of Man's creation. We saw not Adam and Eve, but the One-Man and the One-Woman, whereas Adam and Eve may have been a later couple brought together by Tumilten. It's the new Genesis, or rather, the old explained. The Biblical Adam-and-Eve story is history, not religion, remember that. Anyway, the first-man and first-woman story is not solely a Biblical story at all. Think of the fable of Prometheus and Pandora in Greek mythology. Then in the Vedas of India, Brahma and his four sons, who were given wives from Heaven. In Northern mythology there are Aske and Embla, the progenitors of the human race. They all bear the curious relationship that the man in each case was *given* a wife, respectively by Jehovah, Jupiter, Brahma, and Odin. A story that is so universal and has so many points in common makes it a historical fact. What we have heard and seen here gives the true picture of these many versions."

"Huh," I grunted. "This version is more fantastic than all the others put together. Tell me this, why that ambiguous phrase 'Tumilten is Tumilten'?"

I thought I had him there. I wanted to trip him up on little details and make him admit the

whole thing was crazy. But he answered quick as a flash:

"Because the robot Tumilten had no conception of the pronoun 'I'. Think once—all through the records it did not once refer to itself except by name or in the third person. To himself, he was not *himself*, but simply Tumilten!"

WALKER reflected a moment. "That brings up the curious thought that the conception of 'I'—my existence of myself separate from the universe at large—is a purely human invention. The robot people did not recognize a fundamental individuality. Perhaps each thought of himself as abstractly as you think of your pared finger-nail."

I am giving you everything Walker said not as gospel truth, but just as his way of explaining things. I don't agree with him at all. How do I explain it all? I don't—can't. I firmly believe there is no explanation—not any reasonable one.

"I can't follow that fancy metaphysics," I growled. "But let me tell you something—there's one thing very odd about that whole series of records. Tumilten—or whoever really made it—was holding back a lot. He seemed to be telling just certain things, as if to get our reactions for his own benefit. But of course the record was made

plenty long ago, so—*look out!*"

Walker, in the act of lighting a cigarette, had let the match burn to his finger-tips. He flung it down slowly, and damped the unlighted cigarette carefully as though it had been burning. His face was deeply thought-creased.

"Cliff—"

"No, I'm going. I can see you have a spell of fantastic theories coming on. Besides, I have to sleep this off—it's worse than drugs—"

Still mumbling, I left, leaving Walker in a trance.

I STILL don't believe it!" were my words of greeting the next evening.

Walker raised a face that showed by its haggardness that he had been up all the past twenty-four hours. "Cliff," he said, "I got a letter from Micolet, the paleontologist who found the metal ball. They have finally determined the age of the clay-matrix in which the thing was found. The fossils cannot be less than 25,000 years old!"

"I don't believe that either!" I said stubbornly. I was in a completely disbelieving mood.

Walker held up a flask in which two gold leaves hung suspended from a conductor rod running through a rubber cork. "This is an electroscope," he explained. "It indicates the electrical charge of any object, or of

the air surrounding the conductor rod. When I hold it near that metal ball from which we got our records, *the leaves fly apart!*"

"Huh," I said. "The metal ball is charged."

"No, the air around it is, because there's radium inside!"

"And—?"

"Don't you see, Cliff?" cried Walker, jumping to his feet. "It means that metal ball is not just any mechanism, but is the very mechanism that the robot people called a brain-unit!"

I gulped. "That is—Tumilten's own *brain?*"

Walker nodded excitedly. "You gave me the hint last night, saying the records seemed to be created on the spot, for us. Stupidly, I puzzled over that for hours before thinking of a way to prove it, simply with an electro-scope to detect the radium."

"But the radium must have been burned out in 25,000 years!"

"You forget that only *half* of any given amount of radium burns out every 1,700 years. Most of it is gone, but about 1/30 of it is still active, *enough to keep that mechanical brain at least partially alive!*"

"Good God! Alive?"

"Yes, the body had long rusted away, as have all the cities of the robot people in the past 25,000 years, so that nothing remains of them but that one metal

ball, made of an incredibly resistant alloy."

"Good God! Alive!" I gasped again. I picked up the metal ball gingerly, lying on the work-bench, and looked at it wide-eyed. A brain—a mechanical brain 25,000 years old—and alive!"

"Bill!" I faced about suddenly. "Bill, if we found a way to open it and put in more radium—wouldn't it really come to life?"

"It would, except for one thing," said Walker. "*It died this morning!*"

"Died!"

"Yes. Whether the waning emanations finally ceased to nourish it, or the effects of the high-frequency field gradually disrupted it, or whether, somehow, it *wanted* to die, I don't know. But it is completely dead to the Tesla field. We might have heard much more—there must be far more that it had to tell, this ancient brain of metal—but it will remain a secret for ever!"

Curiously enough, my thought at the moment was, "And better so!"

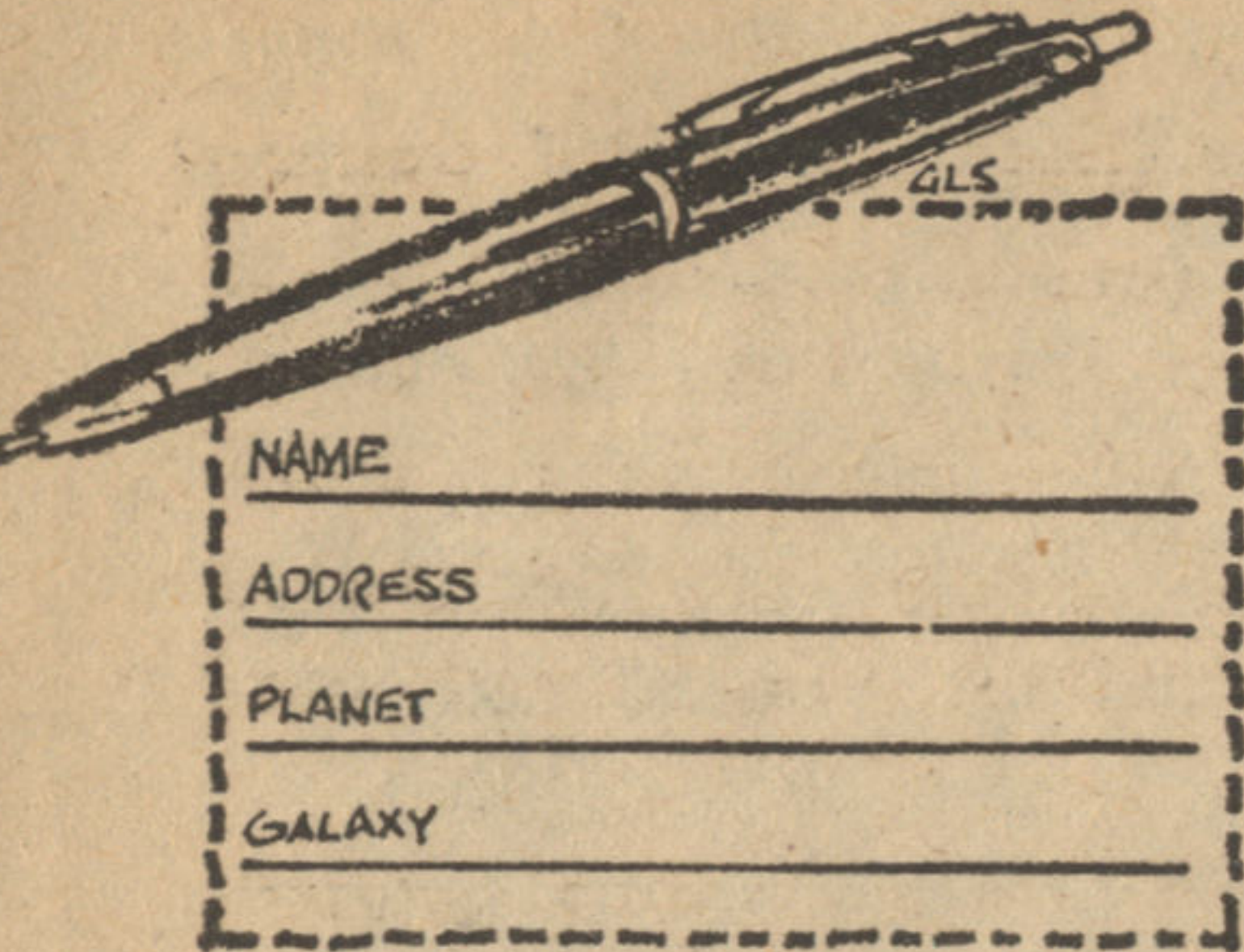
Walker's epitaphal comment was appropriate: "He told us the first story ever to be told among the human race, in a different way."

Yes, and from the beginning!

THE END

CLASSIFIED market place

RATES AND TERMS: 25¢ per word (including name and address). Minimum order \$2.50. Payment must accompany copy except when ads are placed by accredited advertising agencies. Frequency discount: 5% for 6 months; 10% for 12 months paid in advance.



NAME _____
ADDRESS _____
PLANET _____
GALAXY _____

GENERAL INFORMATION: First word in all ads set in bold caps at no extra charge. Additional words may be set in bold caps at 5¢ extra per word. All copy subject to publisher's approval. **Closing Date:** 1st of the 3rd preceding month (for example, April issue closes January 1st). Send order and remittance to: Martin Lincoln, FANTASTIC, One Park Avenue, New York, New York 10016

AUTHORS

AUTHORS! Learn how to have your book published, promoted, distributed. Free booklet "ZD", Vantage, 120 West 31 St., New York 1.

BINOCULARS AND TELESCOPES

SCIENCE Bargains—Request Free Giant catalog "CJ"—148 pages—Astronomical Telescopes, Microscopes, Lenses, Binoculars, Kits, Parts, War surplus bargains. Edmund Scientific Co., Barrington, New Jersey.

BOOKS AND MAGAZINES

READ America's Amateur Magazines. 8 for \$1.00. Seth A. Johnson, 330 Stiles St., Vaux Hall, N.J.

BACK issues, Scientifantasy magazines, books. Free catalog. Gerry de la Ree, 277 Howland, River Edge, N.J.

NAME the book!—we'll find it for you! Out-of-print book specialists. All subjects. (Title alone is sufficient.) Write—no obligation. Books-On-File, Dept. AMF, Union City, New Jersey.

WHY Buy Books? Send 10¢ For information. Science Fiction Circulating Library, P.O. Box 1308, South San Gabriel, Calif.

SCIENCE Fiction Review contains concise, timely reviews of science fiction magazines, paperbacks, and books. Includes articles by Leinster, Norton, Anderson, Carnell, etc. Send for free sample copy. Box 1568, San Diego, Calif. 92112.

SPECIALIST: Science-Fiction, Fantasy, Weird fiction. Books, pocketbooks. Lists issued. Stephen's Book Service, 63 Third Avenue, New York 3, N.Y.

HOBBIES, Careers, Repairs: books bought, sold, exchanged. Special Lonely Hour Books—love diary "Ruthbella"—\$2.00; confessional autobiography "Seven Mortal Loves"—\$2.00 (refundable). Descriptive literature, 10¢. Bookways, Box 444, Fort Lee, N.J.

EDUCATIONAL OPORTUNITIES

LEARN While Asleep, hypnotize with your recorder, phonograph. Astonishing details, sensational catalog free! Sleep-Learning Association, Box 24-ZD, Olympia, Washington.

LEARN While Asleep. Remarkable. Scientific. 92% Effective. Details Free. ASR Foundation, Box 7021, Dept. e.g. Lexington, Kentucky.

EMPLOYMENT INFORMATION

FOREIGN Employment. Construction, other work projects. Good paying overseas jobs with extras, travel expenses. Write only: Foreign Service Bureau, Dept. D, Bradenton Beach, Fla.

EMPLOYMENT Resumes. Get a better job & earn more! Send only \$2.00 for expert, complete Resume Writing Instructions. J. Ross, 80-34 Kent St., Jamaica 32, N.Y., Dept. F.

FOR SALE

WATCHES, Rings wholesale. 300 styles. Catalog 25¢. Empire, 1916-LB Fifth, Sacramento 14, Calif.

RAY GUN—Want to build a laser? Complete set of instructions tells you everything. Shoots a pencil-thin beam of light. Burns, instantly, anything in its path. You can build one for about \$40. Really a fabulous item. A must for every science fiction buff and science experimenter. \$9.95 ppd. Exacto Supply Co., 109½ W. 5th, Pittsburg, Kansas.

ABACUS, 15-Line, big counters + 240 p. textbook = \$7.00. Joe Celko, 954 Katherwood, Atlanta, Ga.

SOMETHING TO SELL? Your ad in these columns will bring fast, low-cost results. Send Fantastic your order Now!

BUSINESS OPPORTUNITIES

INVESTIGATE Accidents—Earn \$750 to \$1,000 monthly. Men urgently needed. Car furnished. Business expenses paid. No selling. No college education necessary. Pick own job location. Investigate full time. Or earn \$6.44 hour spare time. Write for Free Literature. No obligation. Universal, CZ-6, 6801 Hillcrest, Dallas 5, Texas.

PLASTICS—cash in now with my new Home Producers "No-Selling" Plan. I supply everything—even Financing! NPC. Box 23321-G ZZ. Los Angeles 23, Calif.

I MADE \$40,000.00 Year by Mailorder! Helped others make money! Start with \$10.00—Free Proof. Torrey, Box 3566-N, Oklahoma City 6, Oklahoma.

EARN \$2.50 hour assembling our small Lures and Flies for stores. Write: Lures, Lake Village 14, Arkansas.

FREE Book "990 Successful, Little-Known Businesses". Work home! Plymouth-714L, Brooklyn 4, New York.

TAPE AND RECORDERS

TAPE Recorders. Hi-Fi Components, Sleep-Learning Equipment, Tapes, Unusual Values. Free Catalog. Dressner Dept. 15, 1523 FA Jericho Tpke, New Hyde Park 15, N.Y.

PORTABLE Tape Recorder—Quality 4 transistor unit complete with microphone, earphone, tape, reels, and batteries. \$27.50 ppd. Preston Electronics, 109½ W. 5th, Pittsburg, Kansas.

MISCELLANEOUS

CARDS, numerology, Birthdate \$1.00. Rose, 8512 South Major, Stickney, Ill.

STRANGE Unique Items Catalog 10¢. Black Magic Shop, Dept. E, Box 5664, Minneapolis, Minn., 55417.

SHAMELESS-Lady—Tossing Coin. Good Luck Piece. "Heads," "Tails," Wow! A riot, 50¢ ppd. Wayno, Box 182-D, Addison, Michigan.

INVENTIONS? Electronics? Let's go! Whet your imagination on Government Publications. Unique list \$1.00. Send Today. Foggs, Box 6054 Cherry Creek Station, Denver, Col.

POWERFUL and result-getting self-improvement methods! Send 25¢ for illustrated brochures. Emersel Company, Dept. B, Box 125, Lincoln 1, Nebraska.

YOUR ad in FANTASTIC'S Classified Market Place will bring quick results at low cost. For complete information Write: Martin Lincoln, Fantastic, One Park Avenue, New York, New York 10016.

INVENTIONS WANTED

INVENTIONS promoted, protected. All types; design, chemical, mechanical. For free forms and information write New York Invention Service, 141 Broadway, Room 817P, New York 6, N.Y.

MOVIES

MEDICAL Film—Adults only. "Childbirth", one reel 8mm, \$7.50; 16mm, \$14.95. International T, Greenvale, L.I., New York.

PATENTS

INVENTIONS; ideas developed for Cash Royalty sales. Raymond Lee, 2104G Bush Building, New York City, 36.

MUSIC

POEMS wanted for songs and records. Send poems. Crown Music, 49-RB West 32, New York 1.

WANTED TO BUY

QUICKSILVER, Platinum, Silver, Gold. Ores analyzed. Free Circular. Mercury Terminal, Norwood, Massachusetts.

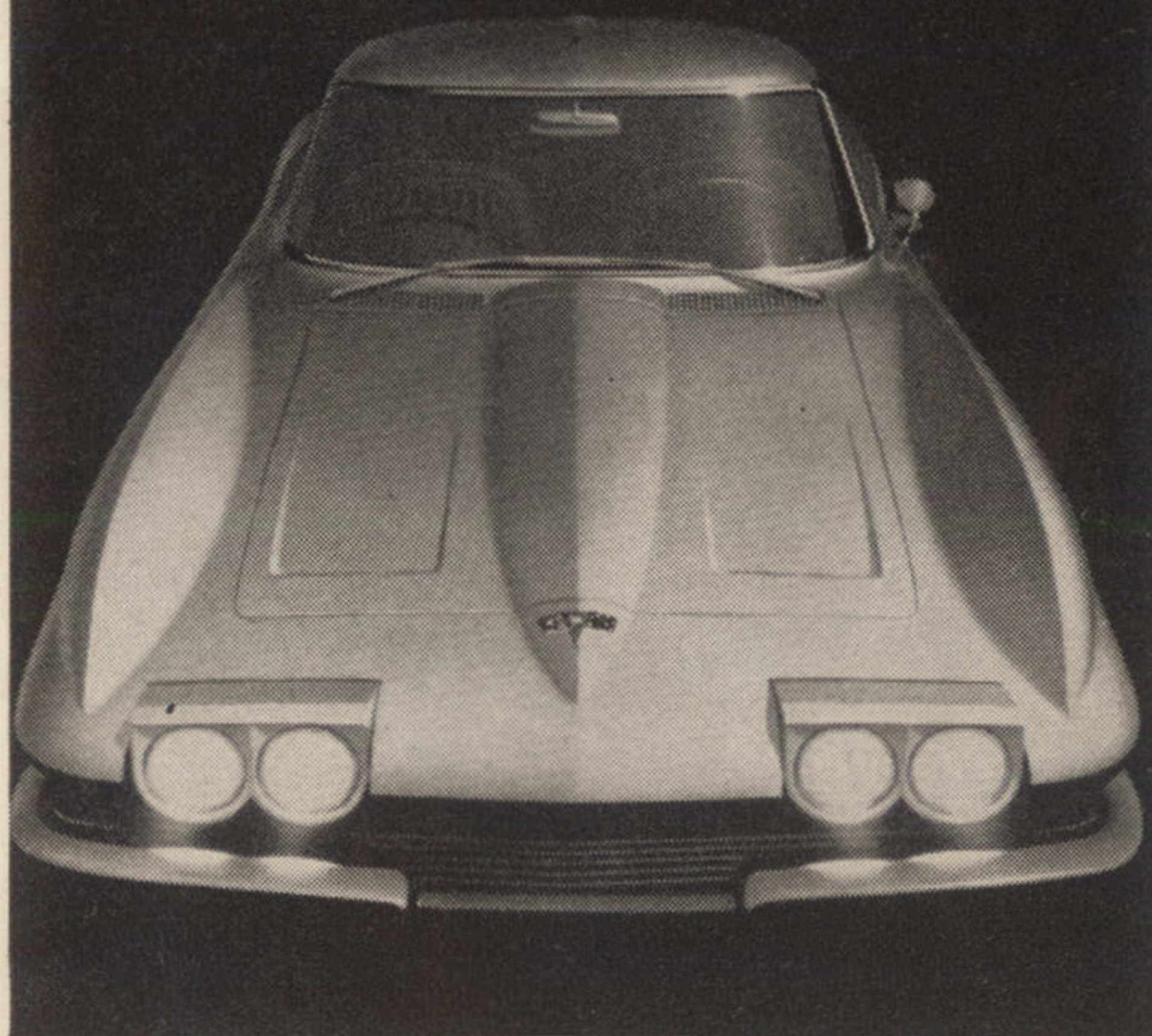
STAMPS

KENNEDY Stamp Free! U.S. Dollar Stamps, Columbus Issue, Pony Express, All Genuine and Free! Send 10¢ for mailing. Empire Stamp Corp., Dept. ZZ, Toronto, Canada.

Printed in U.S.A.

HERE IN ONE PUBLICATION

1964 CAR and DRIVER **YEARBOOK**



ARE ROAD TESTS ON TWENTY '64 CARS . . . COMPARATIVE DATA ON FIFTY-TWO OTHER MODELS . . . A BEAUTIFUL SALON OF GREAT MOTOR RACING PHOTOGRAPHS . . . A RUNDOWN ON AVAILABLE ACCESSORIES . . . A COMPARISON-IN-DEPTH OF FORD AND CHEVROLET . . . NEWS OF TECHNICAL ADVANCES AND INNOVATIONS . . .

**ALL IN THE 1964 CAR AND DRIVER YEARBOOK
—NOW ON SALE AT YOUR FAVORITE NEWSSTAND
FOR ONLY ONE DOLLAR.**

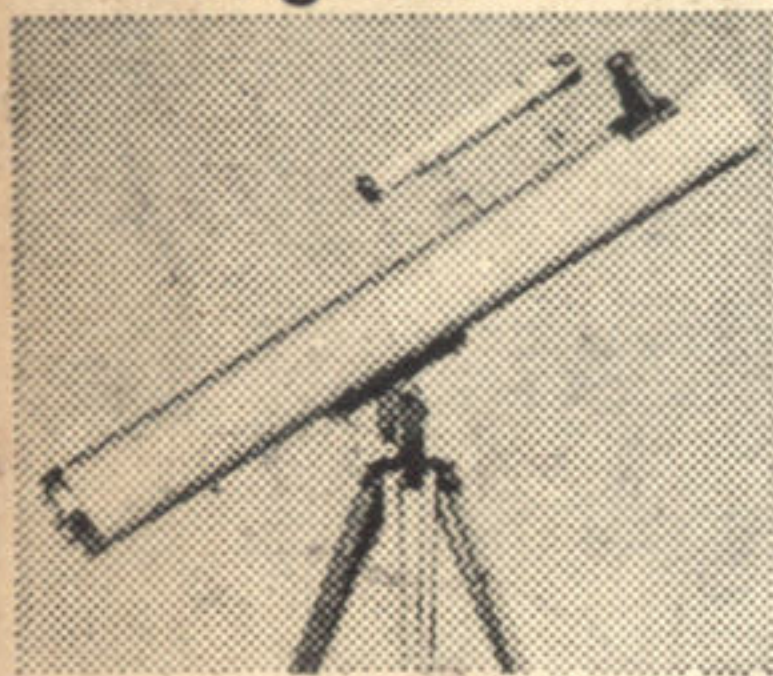
GET READY FOR THE SPACE and SCIENCE ERA! SEE SATELLITES, MOON ROCKETS CLOSE-UP

AMAZING SCIENCE BUYS

for FUN, STUDY or PROFIT



Bargain! 3" Astronomical Telescope



See the stars, moon, phases of Venus, planets close up! 60 to 180 power—famous Mt. Palomar Reflecting type. Unusual Buy! Equipped with Equatorial mount; finder telescope; hardwood tripod. Included FREE: "STAR CHART"; 272-page "HANDBOOK OF HEAVENS"; "HOW TO USE YOUR TELESCOPE" book. Stock No. 85,050-HK \$29.95 pstd.

Stock No. 85,105-HK

4 1/4" Reflecting Telescope—up to 255 Power, all-metal pedestal mount. \$79.50 F.O.B. Barrington, N. J.

SCIENCE TREASURE CHESTS

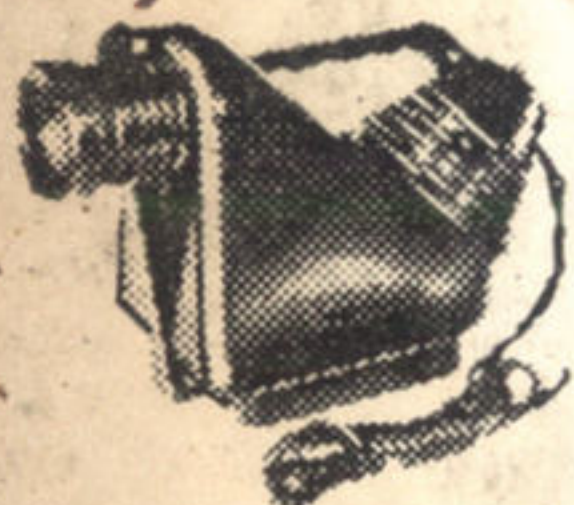
For Boys—Girls—Adults!

Science Treasure Chest—Extra-powerful magnets polarizing filters, compass, one-way-mirror film prism, diffraction grating, and lots of other items for hundreds of thrilling experiments, plus a Ten Lens Kit for making telescopes, microscopes, etc. Full Instructions.

Stock No. 70,342-HK\$5.00 Postpaid

Science Treasure Chest DeLuxe

Stock No. 70,343-HK\$10.00 Postpaid



TERRIFIC BUY! AMERICAN MADE! OPAQUE PROJECTOR

Projects illustrations up to 3" x 3 1/2" and enlarges them to 35" x 30" if screen is 6 1/2 ft. from projector; larger pictures if screen is further away. No film or negatives needed. Projects charts, diagrams, pictures, photos, lettering in full color or black-and-white. Operates on 115 volt, A.C. current 6-ft. extension cord and plug included. Operates on 60 watt bulb not included. Size 12" x 8" x 4 1/2" wide. Weight 1 lb. 2 oz. Plastic case with built-in handle.

grams, pictures, photos, lettering in full color or black-and-white. Operates on 115 volt, A.C. current 6-ft. extension cord and plug included. Operates on 60 watt bulb not included. Size 12" x 8" x 4 1/2" wide. Weight 1 lb. 2 oz. Plastic case with built-in handle.

Stock No. 70,199-HK\$7.95 Postpaid

CRYSTAL GROWING KIT

Do a crystallography project illustrated with large beautiful crystals you grow yourself. Kit includes the book, "Crystals and Crystal Growing" and generous supply of the chemicals you need to grow large display crystals of potassium aluminum sulfate (clear), potassium chromium sulfate (purple), potassium sodium tartrate (clear), nickel sulfate hexahydrate (blue green) of heptahydrate (green), potassium ferricyanide (red), and copper acetate (blue green).

Stock No. 70,336-HK\$9.50 Postpaid



LIFE SIZE VISIBLE HUMAN HEAD

Precise, Full Color, Take-apart Model Study the most complex organ easily, inexpensively. Ideal for student, hobbyist, professional. You will be amazed at the detail. Molded from actual human skull. Eyes, ears and teeth easily removed and disassembled for complete study. Entire brain spinal cord and organs of mouth and throat presented in vivid detail. Amazingly low priced—conforms to rigid laboratory standards. 16-page fully illustrated medical handbook included.

Stock No. 70,447-HK\$9.95 Postpaid

OTHER VISIBLE TAKE-APART MODELS

Stock No. 70,228-HK Man\$4.98 Postpaid

Stock No. 70,283-HK Woman\$4.98 Postpaid

SCALE MODELS

Stock No. 70,294-HK Skull\$4.95 Postpaid

Stock No. 90,022-HK Skeleton\$5.00 Postpaid

AUTOMATICALLY SHOWS TIME, TIDES,
POSITION OF SUN, MOON, STARS

NEW SPILHAUS SPACE CLOCK

19 DIFFERENT READINGS
AT A GLANCE

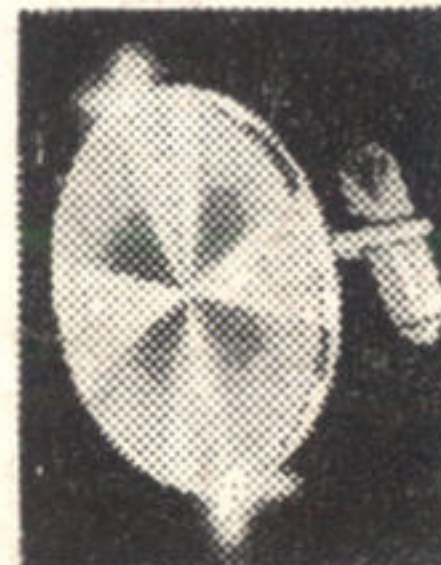


Startling scientific achievement, yet completely practical and functional. Designed for the space age by world renowned scientist, Dr. Athelstan Spilhaus, Dean of Technology, University of Minnesota. Handsome conversation piece—constantly up-to-date encyclopedia of the sky. The Spilhaus Space clock has beautiful fruit-wood case and 3 sky-blue dials. Blends with decor of any home, office, club room, classroom, museum, display window, hotel, etc. Large dial shows sun position, daily sun rise and set, moon position, moon rise and set, phase of moon, low and high tide time, current stage of tide, day and month of year, current position of stars in sky, time of star rise and star set, relationships of sun, moon and stars, sidereal or star time. Left dial shows local time. Right dial shows world time including major U.S. cities and Universal (Greenwich) time. Operates on house current—requires only one simple setting for any geographic location. Measures 16" high x 11 1/2" wide x 4 1/2" deep. Presentation plaques available. Complete satisfaction guaranteed or money refunded.

STOCK NO. 1201-HK Ship. Wt. 12 lbs. \$175 F.O.B. (+F.E.T.)

DAZZLING DIFFRACTION JEWELRY FOR MEN AND WOMEN NOW AVAILABLE IN GOLD

This science-inspired jewelry glows with the twinkling magic of rainbows. It uses circular patterns of 1" DIFFRACTION GRATING REPLICA to break up light into all the rich, deep colors of nature's grandest phenomenon. Incorporated into beautiful jewelry, these exquisite new fashion accessories are now available by lustrous gold as well as silver. Other items available. Write for complete list.



ITEM	GOLD	SILVER	PRICE Postpaid
EARRINGS	No. 1814-HK	No. 1704-HK	\$2.20
CUFF LINKS	1827-HK	1714-HK	2.20
PENDANT	1818-HK	1729-HK	2.20
3/4" TIE CLASP & CUFF LINK SET	1831-HK	1743-HK	3.85
BRACELET (Six 3/4" gratings)	1816-HK	1735-HK	7.70

6 x 30 WAR SURPLUS AMERICAN-MADE BINOCULARS



Big savings—brand new. Crystal clear viewing—6 power. Optics fully coated. Individual focus. Exit pupil 5mm. Approx. field—445 ft. at 1000 yds. Excellent for spectator sports, races, hunting, etc. Normally costs \$100 up. Complete with carrying case and strap.

Stock No. 963-HK\$33.00 Postpaid

7 x 35 AMERICAN MADE BINOCULARS

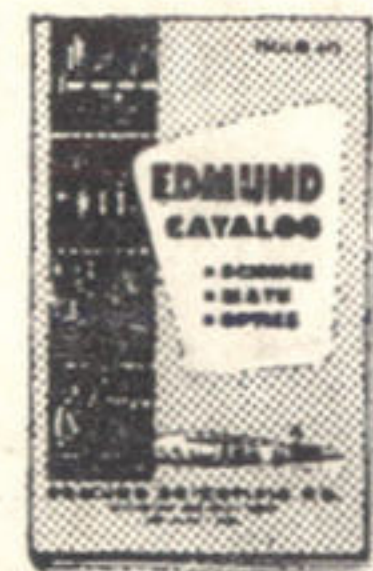
Stock No. 964-HK\$60.50 Ppd. (tax included)

7 x 50 BINOCULARS—Terrific Buy!

Stock No. 1544-HK\$74.80 Pstd. (tax incl.)

WRITE FOR FREE GIANT CATALOG

Completely new, enlarged edition. New items, categories, illustrations. 148 easy-to-read pages packed with over 1000 items. Enormous selection of Astronomical Telescopes, Microscopes, Binoculars, Magnifiers, Lenses, Prisms, parts, accessories, math learning aids, do-it-yourself kits, exciting exclusives. Write for free Catalog, "HK".



ORDER BY STOCK NUMBER • OPEN ACCT. TO RATED FIRMS • SATISFACTION GUARANTEED!

EDMUND SCIENTIFIC CO., BARRINGTON, NEW JERSEY 08007