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MARCH, 1971 Vol. 44, No. 6

NEW NOVEL

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this year's **HUGO** and **NEBULA** Award Winner,
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Cover by **JOHN PEDERSON, JR.**

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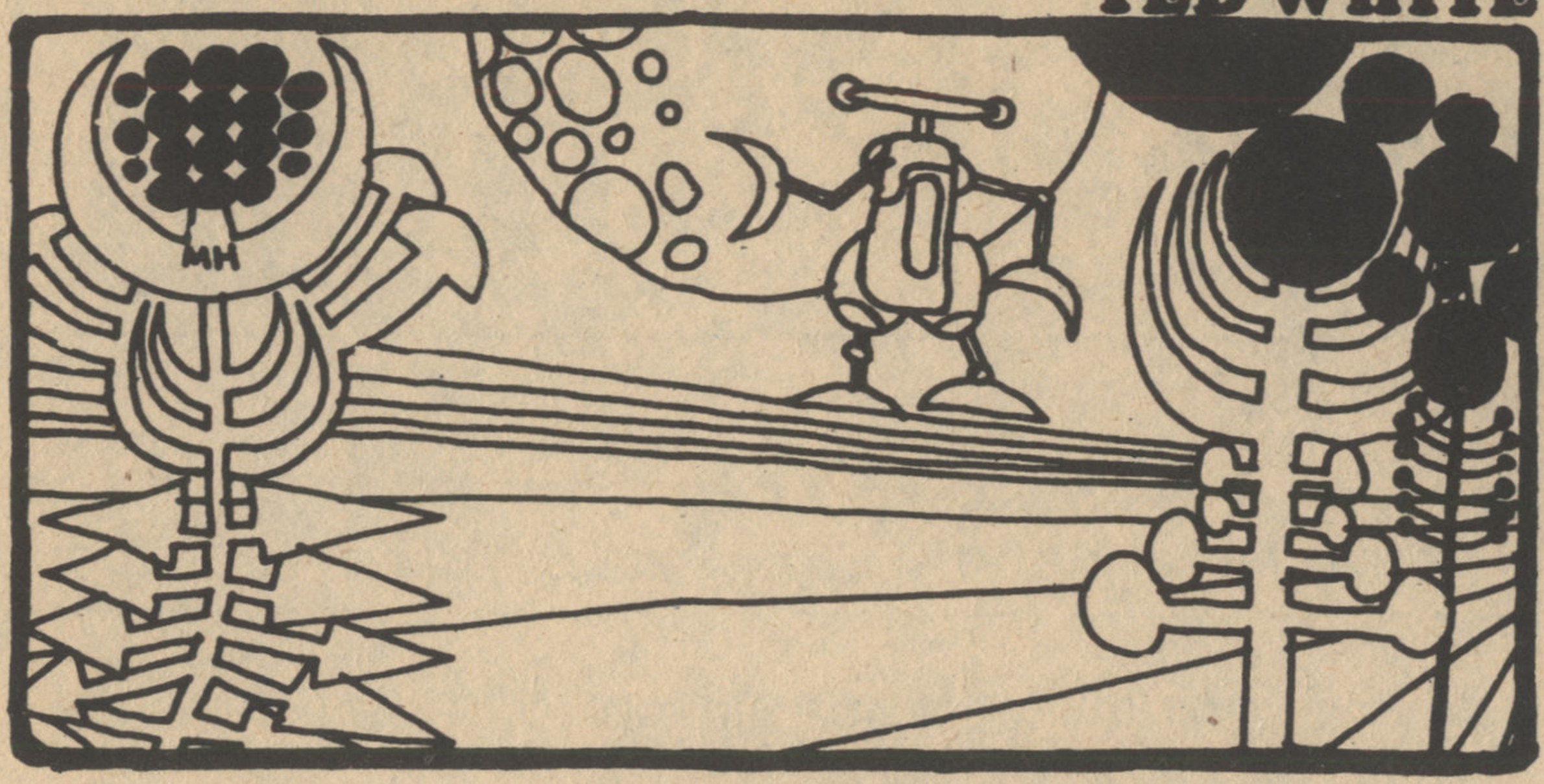

EDITORIAL

Some ten years ago, when Richard Lupoff and I were still fans without any professional sales to boast of, he began publishing a fanzine called XERO, which I mimeographed and to which I occasionally contributed. XERO was one of the better fanzines of its era (it ultimately won a Hugo), but its primary impact was almost accidental: it launched comics fandom.

It began in the first issue, with Lupoff's affectionately nostalgic article about Captain Marvel, "The Big Red Cheese." Comics were not then particularly popular on the cultural front, prices of back issues were modest, comics conventions were unheard-of, and the big revival of superheroes that was to dominate the 60's was then still lurking in the wings off-stage.

Lupoff had the idea that it might be fun to run a series of reminiscences about the comics of our youth (late-30's, 40's) under the inclusive title of "All In Color for a Dime." (Prices were then just about to escalate to 12¢ for publications literally half the size of those we fondly recalled.) For the second issue of XERO I wrote a piece called "The Spawn of M.C. Gaines," about the man I later termed "The Johnny Appleseed of Comics." It brimmed with names and facts and wasn't particularly good. It even required a postscript ("Son of the Spawn of M.C. Gaines") in a later issue to tie up several loose ends. Later others, like Richard Kyle, Don Thompson and Roy Thomas, wrote pieces about various comics and comic characters from the 40's, and a certain style (Lupoff even wrote a style-sheet for the series) emerged. Ultimately Henry Morrison, then Vice-President of the Scott Meredith Literary Agency, suggested the series be collected into book form, and Advent: Publishers expressed interest in doing such a book. Somewhere around 1965, Lupoff called me up and asked if I'd rewrite my chapter for book publication, bringing it a little more into line with the style of the other pieces, and narrowing the focus down to Superman and Batman. I said I would, but wasn't

sure I could find my copy of the original piece. Lupoff loaned me his complete bound volume of XERO.

A year or two later I admitted, sheepishly, I hadn't gotten around to it yet, and the set of XERO was gathering dust on my shelf. "Ace Books is interested, Ted," he told me. "There might even be a little money in it."

And after another year or more had passed (circa 1968), with a hardcover edition and a book club lined up, I finally responded to prodding and pulled down the volume of XEROs and read my old piece. It was terrible and I couldn't finish it. It was easily the worst of the series. In complete disgust I put it aside and sat down to start from scratch. I rolled a sheet of paper into my typewriter and began typing. Many hours later, I pulled the last sheet out. I'd written thirty pages—in a single stretch. It had been almost effortless—like opening a mental faucet and letting it just gush out—and even when I reread the manuscript a day later, I was satisfied. It was a good piece, and stood head and shoulders over the one of the same name in the old XERO. I mailed it to Lupoff (who was now in Poughkeepsie, working for IBM) and he called me when he received it to tell me he liked it (despite a few niggling errors I'd made) and he was damned happy to have finally gotten it. (I don't believe either of us really thought I'd ever get around to writing it.)

By this point, the book was beginning to take shape, and Lupoff was sick of it. He called in Don Thompson as co-editor, and turned over most of the nit-picking of detail work to him. (Don is a Cleveland newspaper man and, with his wife Maggie, the editor of NEWFANGLES, the newspaper of comics fandom.) And although nearly all the book was assembled and ready to go to press during that year, the editors (and Henry Morrison, now their agent on the book) ran into a stumbling block in the form of the biggest comics publisher in the industry, who would not, for some reason, release rights for color plates from their comics. This stalled the book for more than a year—right past its Christmas, 1969, release date, in fact.

But finally all was in readiness, the agreements were signed, and the book went into production . . . for the Christmas, 1970, season.

The title was inevitable: *All In Color For A Dime.* Published in hardcovers by Arlington House, a selection of the Nostalgia Book Club, and slated for paperback release a year later by Ace Books. The cover strikes me as one any of us could have improved upon, but the contents must surely make up for that. Contributors include Bill Blackbeard, Jim Harmon, Roy Thomas, Ron Goulart, Harlan Ellison, and editors Lupoff and Thompson. The price is $11.95, and it's a solid, fat book with fifteen pages of color plates.

I tell you all this as a prologue.

About a month before I left New York City, I received a phone call from Tony Alspagh, who is a very nice lady who works for Arlington House. She was trying to arrange promotional appearances on radio and television for contributors to the book. Upon hearing that I was moving to Virginia, she wondered if I'd care to appear on the Betty Groebli Show, on Washington, D.C.'s WRC-FM, the local NBC station. I agreed, and she called back to tell me I was booked for October 30th—"a sort of Halloween show." It would be broadcast live, noon to one, and repeated at ten that night, with the possibility of edited portions appearing on the network Monitor show over the

(CONTINUED ON PAGE 127)

To have followed Ursula K. Le Guin's career is to have witnessed the certain maturing of one of this field's major talents. From her early short stories, through her five novels, she has demonstrated a continued growth. Her short story, "The Good Trip" (in the August, 1970 FANTASTIC), was a haiku in prose, and her last novel, The Left Hand of Darkness, *was judged the best sf novel of 1969—by both the SFWA (the Nebula Award) and science fiction fandom (the Hugo—awarded at the 1970 World SF Convention in Heidelberg, Germany). In this, her newest novel, she relentlessly pursues one of the most remarkable concepts ever imagined: the dream-state of reality—and the reality of dreams. I'm confident that this novel is also going to be ranked with the best of this year.*

THE LATHE OF HEAVEN

URSULA K. LEGUIN

Illustrated by MICHAEL WM. KALUTA

(First of Two Parts)

Chapter 1.

Confucius and you are both dreams, and I who say you are dreams am a dream myself. This is a paradox. Tomorrow a wise man may explain it, that tomorrow will not be for ten thousand generations.

—Chuang Tse, II.

CURRENT-BORNE, wave-flung, tugged hugely by the whole might of ocean, the jellyfish drifts in the tidal abyss. The light shines through it, and the dark enters it. Borne, flung, tugged from anywhere to anywhere, for in the deep sea there is no compass but nearer and farther, higher and lower, the jellyfish hangs and sways; pulses move slight and quick within it, as the vast diurnal pulses beat in the moondriven sea. Hanging, swaying, pulsing, the most vulnerable and insubstantial creature, it has for its defense the violence and power of the whole ocean, to which it has entrusted its being, its going, and its will.

But here rise the stubborn continents. The shelves of gravel and the cliffs of rock break from water baldly into air, that dry terrible outerspace of radiance and instability, where there is no support for life. And now, now the currents mislead and the waves betray, breaking their word, their endless circle, to leap up in loud foam against rock and air, breaking . . .

What will the creature made all of seadrift do on the dry sand of daylight;

what will the mind do, each morning, waking?

His eyelids had been burned away, so that he could not close his eyes, and the light entered into his brain, searing. He could not turn his head, for blocks of fallen concrete pinned him down and the steel rods projecting from their cores held his head in a vise. When these were gone he could move again; he sat up. He was on the cement steps; a dandelion flowered by his hand, growing from a little cracked place in the steps. After a while he stood up, but as soon as he was on his feet he felt sick, deathly sick, and knew it was the radiation sickness. The door was only two feet from him, for the balloonbed when inflated half filled his room. He got to the door and opened it and got through it. There stretched the endless linoleum corridor, heaving slightly up and down for miles, and far down it, very far, the men's room. He started out towards it, trying to hold on to the wall, but there was nothing to hold on to, and the wall turned into the floor.

"Easy now. Easy there."

The elevator guard's face was hanging above him like a paper lantern, pallid, fringed with greying hair.

"It's the radiation," he said, but Mannie didn't seem to understand, saying only, "Take it easy."

He was back on his bed in his room.

"You drunk?"

"No."

"High on something?"

"Sick."

"What you been taking?"

"Couldn't find the fit," he said, meaning that he had been trying to lock the door through which the dreams came, but none of the keys had fit the lock.

"Medic's coming up from the fifteenth floor," Mannie said faintly through the roar of breaking seas.

He was floundering and trying to breathe. A stranger was sitting on his bed holding a hypodermic and looking at him. "That did it," the stranger said. "He's coming round. Feel like hell? Take it easy. You ought to feel like hell. Take all this at once?" He displayed seven of the little plastifoil envelopes from the autodrug dispensary. "Lousy mixture, barbiturates and dexedrine, what were you trying to do to yourself?"

It was hard to breathe, but the sickness was gone, leaving only an awful weakness.

"They're all dated this week," the medic went on, a young man with a brown ponytail and bad teeth. "Which means they're not all off your own Pharmacy Card, so I've got to report you for borrowing. I don't like to, but I got called in and I haven't any choice, see. But don't worry, with these drugs it's not a felony, you'll just get a notice to report to the police station and they'll send you up to the Med School or the Area Clinic for examination, and you'll be referred to an M.D. or a shrink for VTT—Voluntary Therapy. I filled out the form on you already, used your ID, all I need to know is how long you been using these drugs in more than your personal allotment?"

"Couple months."

The medic scribbled on a paper on his knee.

"And who'd you borrow Pharm Cards from?"

"Friends."

"Got to have the names."

After a while the medic said, "One name, anyhow. Just a formality. It won't get 'em in trouble. See, they'll just get a reprimand from the police, and HEW Control will keep a check on their Pharm Cards for a year. Just a formality. One name."

"I can't. They were trying to help me."

"Look, if you won't give the names, you're resisting, and you'll either go to jail or get stuck into Obligatory Therapy, in an institution. Anyway they can trace the cards through the autodrug records if they want to, this just saves 'em time. Come on, just give me one of the names."

He covered his face with his arms to keep out the unendurable light and said, "I can't. I can't do it. I need help."

"He borrowed my card," the elevator guard said. "Yeah. Mannie Ahrens, 247-602-6023." The medic's pen went scribble scribble.

"I never used your card."

"So confuse 'em a little. They won't check. People use people's Pharm Cards all the time, they can't check. I loan mine, use another cat's, all the time. Got a whole collection of those reprimand things. They don't know. I taken things HEW never even *heard* of. You ain't been on the hook before. Take it easy, George."

"I can't," he said, meaning that he could not let Mannie lie for him, could not stop him from lying for him, could

not take it easy, could not go on.

"You'll feel better in two, three hours," the medic said. "But stay in today. Anyhow downtown's all tied up, the GPRT drivers are trying another strike and the National Guard's trying to run the subway trains and the news says it's one hell of a mess. Stay put. I got to go, I walk to work, damn it, ten minutes from here, that State Housing Complex down on Macadam." The bed jounced as he stood up. "You know there's 260 kids in that one complex suffering from kwashiorkor? All low-income or Basic Support families and they aren't getting protein. And what the hell am I supposed to do about it? I've put in five different req's for Minimal Protein Ration for those kids and they don't come, it's all red tape and excuses. People on Basic Support can afford to buy sufficient food, they keep telling me. Sure, but what if the food isn't there to buy? Ah, the hell with it. I go give 'em Vitamin C shots and try to pretend that starvation is just scurvy . . ."

The door shut. The bed jounced when Mannie sat down on it where the medic had been sitting. There was a faint smell, sweetish, like newly cut grass. Out of the darkness of closed eyes, the mist rising all round, Mannie's voice said remotely, "Ain't it great to be alive?"

Chapter 2.

The portal of God is non-existence.
—Chuang Tse, XXIII

DR. WILLIAM HABER'S office did not have a view of Mount Hood. It was an interior Efficiency Suite on the sixty-third floor of Willamette East Tower, and didn't have a view of anything. But on one of the windowless walls was a big photographic mural of Mount Hood, and at this Dr. Haber gazed while intercommunicating with his receptionist.

"Who's this Orr coming up, Penny? The hysteric with leprosy symptoms?"

She was only three feet away through the wall, but an interoffice communicator, like a diploma on the wall, inspires confidence in the patient, as well as in the doctor. And it is not seemly for a psychiatrist to open the door and shout, "Next!"

"No, doctor, that's Mr. Greene tomorrow at ten. This is the referral from Dr. Walters at the University Medical School, a VTT case."

"Drug abuse. Right. Got the file here. Okay, send him in when he comes."

Even as he spoke he could hear the elevator whine up and stop, the doors gasp open; then footsteps, hesitation, the outer door opening. He could also, now he was listening, hear doors, typewriters, voices, toilets flushing, in offices all up and down the hall and above him and underneath him. The real trick was to learn how not to hear them. The only solid partitions left were inside the head.

Now Penny was going through the first-visit routine with the patient, and while waiting Dr. Haber gazed again at the mural and wondered when such a photograph had been taken. Blue sky, snow from foothills to peak. Years ago, in the sixties or seventies, no doubt. The Greenhouse Effect had been quite

gradual, and Haber, born in 1962, could clearly remember the blue skies of his childhood. Nowadays the eternal snows were gone from all the world's mountains, even Everest, even Erebus fiery-throated on the waste Antarctic shore. But of course they might have colored a modern photograph, faked the blue sky and white peak; no telling.

"Good afternoon, Mr. Orr!" he said, rising, smiling, but not extending his hand, for many patients these days had a strong dread of physical contact.

The patient uncertainly withdrew his almost proffered hand, fingered his necklace nervously, and said, "How do you do." The necklace was the usual long chain of silvered steel. Clothing ordinary, office-worker standard; haircut conservative shoulder-length, beard short. Light hair and eyes, a short, slight, fair man, slightly undernourished, good health, 28 to 32. Unaggressive, placid, milque-toast, repressed, conventional. The most valuable period of relationship with a patient, Haber often said, is the first ten seconds.

"Sit down, Mr. Orr. Right! Do you smoke? The brown filters are tranks, the white are denicks." Orr did not smoke. "Now, let's see if we're together in your situation. HEW Control wants to know why you've been borrowing your friends' Pharmacy Cards to get more than your allotment of pep-pills and sleeping-pills from the autodrug. Right? So they sent you up to the boys on the hill, and they recommended Voluntary Therapeutic Treatment and sent you over to me for the therapy. All correct?"

He heard his own genial, easy tone, well calculated to put the other person at his ease; but this one was still far from easy. He blinked often, his sitting posture was tense, the position of his hands was over-formal: a classic picture of suppressed anxiety. He nodded as if he was gulping at the same moment.

"Okay, fine, nothing out of the way there. If you'd been stockpiling your pills, to sell to addicts or commit a murder with, then you'd be in hot water. But as you simply used 'em, your punishment's no worse than a few sessions with me! Now of course what I want to know is *why* you used 'em, so that together we can work out some better life-pattern for you, that'll keep you within the dosage limits of your own Pharm Card for one thing, and perhaps for another set you free of any drug dependency at all. Now your routine," his eyes went for a moment to the folder sent down from the Med School, "was to take barbiturates for a couple of weeks, then switch for a few nights to dextro-amphetamine, then back to the barbiturates. How did that get started? Insomnia?"

"I sleep well."

"But you have bad dreams."

The man looked up, frightened: a flash of open terror. He was going to be a simple case. He had no defenses.

"Sort of," he said huskily.

"It was an easy game for me, Mr. Orr. They generally send me the dreamers." He grinned at the little man. "I'm a dream specialist. Literally. An oneirologist. Sleep and dreaming are my field. Okay, now I can proceed to the next educated guess, which is

that you used the phenobarb to suppress dreaming, but found that with habituation the drug has less and less dream-suppressive effect, until it has none at all. Similarly with the dexedrine. So you alternated them. Right?"

The patient nodded stiffly.

"Why was your stretch on the dexedrine always shorter?"

"It made me jumpy."

"I'll bet it did. And that last combination dose you took was a lulu. But not, in itself, dangerous. All the same, Mr. Orr, you were doing something dangerous." He paused for effect. "You were depriving yourself of dreams."

Again the patient nodded.

"Do you try to deprive yourself of food and water, Mr. Orr? Have you tried doing without air lately?"

He kept his tone jovial, and the patient managed a brief unhappy smile.

"You know that you need sleep. Just as you need food, water, and air. But did you realise that sleep's not enough, that your body insists just as strongly upon having its allotment of *dreaming* sleep? If deprived systematically of dreams, your brain will do some very odd things to you. It will make you irritable, hungry, unable to concentrate—does this sound familiar? It wasn't just the dexedrine!—liable to daydreams, uneven as to reaction-times, forgetful, irresponsible, and prone to paranoid fantasies. And finally it will force you to dream—no matter what. No drug we have will keep you from dreaming, unless it kills you. For instance, extreme alcoholism can lead to a condition called central pontine myelinolysis, which is fatal; its cause is a lesion in the lower brain resulting from lack of dreaming. Not from lack of sleep! From lack of the very specific state that occurs during sleep, the dreaming state, REM sleep the d-state. Now you're no alcoholic, and not dead, and so I know that whatever you've taken to suppress your dreams, it's worked only partially. Therefore, *a*, you're in poor shape psychically from partial dream-deprivation; and *b*, you've been trying to go up a blind alley. Now. What started you up that blind alley? A fear of dreams; of bad dreams, I take it, or what you consider to be bad dreams. Can you tell me anything about these dreams?"

Orr hesitated.

Haber opened his mouth and shut it again. So often he knew what his patients were going to say, and could say it for them better than they could say it for themselves. But it was their taking the step that counted. He could not take it for them. And after all, this talking was a mere preliminary, a vestigial rite from the palmy days of analysis; its only function was to help him decide how he should help the patient, whether positive or negative conditioning was indicated, what he should *do*.

"I don't have nightmares more than most people, I think," Orr was saying, looking down at his hands. "Nothing special. I'm . . . afraid of dreaming."

"Of dreaming bad dreams."

"Any dreams."

"I see. Have you any notion how that fear got started? Or what it is you're afraid of, wish to avoid?"

Orr did not reply at once, but sat looking down at his hands, square, reddish hands lying too still on his knee. Haber prompted just a little. "Is it the irrationality, the lawlessness, sometimes the immorality of dreams, is it something like that that makes you uncomfortable?"

"Yes, in a way. But for a specific reason. You see, here . . . here I . . ."

Here's the crux, the lock, thought Haber, also watching those tense hands. Poor bastard. He has wet dreams, and a guilt complex about 'em. Boyhood enuresis, compulsive mother—

"Here's where you stop believing me."

The little fellow was sicker than he looked.

"A man who deals with dreams both awake and sleeping isn't too concerned with belief and disbelief, Mr. Orr. They're not categories I use much. They don't apply. So ignore that, and go on. I'm interested." Did that sound patronising? He looked at Orr to see if the statement had been taken amiss, and met, for one instant, the man's eyes. Extraordinarily beautiful eyes, Haber thought, and was surprised by the word, for beauty was not a category he used much either. The irises were blue or grey, very clear, as if transparent. For a moment Haber forgot himself and stared back at those clear, elusive eyes; but only for a moment, so that the strangeness of the experience scarcely registered on his conscious mind.

"Well," Orr said, speaking with some determination, "I have had dreams that . . . that affected the . . . non-dream world. The real world."

"We all have, Mr. Orr."

Orr stared. The perfect straight man.

"The effect of the dreams of the just pre-waking 'd-state on the general emotional level of the psyche can be—"

But the straight man interrupted him. "No, I don't mean that," and stuttering a little, "What I mean is, I dreamed something, and it came true."

"That isn't hard to believe, Mr. Orr. I'm quite serious in saying that. It's only since the rise of scientific thought that anybody much has been inclined even to question such a statement, much less disbelieve it. Prophetic—"

"Not prophetic dreams. I can't foresee anything. I simply *change* things." The hands were clenched tight. No wonder the Med School bigwigs had sent this one here. They always sent the nuts they couldn't crack to Haber.

"Can you give me an example? For instance, can you recall the very first time that you had such a dream? How old were you?"

The patient hesitated a long time, and finally said, "Sixteen, I think." His manner was still docile; he showed considerable fear of the subject, but no defensiveness or hostility towards Haber. "I'm not sure."

"Tell me about the first time you're sure of."

"I was seventeen. I was still living at home, and my mother's sister was staying with us. She was getting a divorce and wasn't working, just getting Basic Support. She was kind of

in the way. It was a regular three-room flat, and she was always there. Drove my mother up the wall. She wasn't considerate, Aunt Ethel, I mean. Hogged the bathroom—we still had a private bathroom in that flat. And she kept, oh, making a sort of joking play for me. Half joking. Coming into my bedroom in her topless pyjamas, and so on. She was only about thirty. It got me kind of uptight. I didn't have a girl yet and . . . you know. Adolescents. It's easy to get a kid worked up. I resented it. I mean, she was my aunt."

He glanced at Haber to make sure that the doctor knew what he had resented, and did not disapprove of his resentment. The insistent permissiveness of the late Twentieth Century had produced fully as much sex-guilt and sex-fear in its heirs as had the insistent repressiveness of the late Nineteenth Century. Orr was afraid that Haber might be shocked at his not wanting to go to bed with his aunt. Haber maintained his non-committal but interested expression, and Orr plowed on.

"Well, I had a lot of sort of anxiety dreams, and this aunt was always in them. Usually disguised, the way people are in dreams sometimes; once she was a white cat, but I knew she was Ethel, too. Anyhow, finally one night when she'd got me to take her to the movies, and tried to get me to handle her, and then when we got home she kept flopping around on my bed and saying how my parents were asleep and so on, well, after I finally got her out of my room, and got to sleep, I had this dream. A very vivid one. I could recall it completely when I woke up. I dreamed that Ethel had been killed in a car crash in Los Angeles, and the telegram had come. My mother was crying while she was trying to cook dinner, and I felt sorry for her, and kept wishing I could do something for her, but I didn't know what to do. That was all . . . only when I got up I went into the living room. No Ethel on the couch. There wasn't anybody else in the apartment, just my parents and me. She wasn't there. She never had been there. I didn't have to ask. I remembered. I knew that Aunt Ethel had been killed in a crash on a Los Angeles freeway six weeks ago, coming home after seeing a lawyer about getting a divorce. We had got the news by telegram. The whole dream was just sort of reliving something like what had actually happened. Only it hadn't happened. Until the dream. I mean, I *also* knew that she'd been living with us, sleeping on the couch in the living room, until last night."

"But there was nothing to show that, to prove it?"

"No. Nothing. She hadn't been. Nobody remembered that she had been, except me. And I was wrong. Now."

Haber nodded judiciously, and stroked his beard. What had seemed a mild drug-habituation case now appeared to be a severe aberration; but he had never had a delusion-system presented to him quite so straightforwardly. Orr might be an intelligent schizophrenic, feeding him a line, putting him on, with schizoid inventiveness and deviousness; but he lacked the faint inward arrogance of such people, to which Haber was

extremely sensitive.

"Why do you think your mother didn't notice that reality had changed since last night?"

"Well, she didn't dream it. I mean, the dream really did change reality. It made a different reality, retroactively, which she'd been part of all along. Being in it, she had no memory of any other. I did, I remembered both, because I was . . . there . . . at the moment of the change. This is the only way I can explain it, I know it doesn't make sense. But I have got to have some explanation, or else face the fact that I am insane."

No, this fellow was no milquetoast.

"I'm not in the judgment business, Mr. Orr. I'm after facts. And the events of the mind, believe me, to me are facts. When you *see* another man's dream as he dreams it recorded in black and white on the electroencephalograph, as I've done ten thousand times, you don't speak of dreams as 'unreal.' They exist; they are events; they leave a mark behind them. Okay. I take it that you had other dreams that seemed to have this same sort of effect?"

"Some. Not for a long time. Only under stress. But it seemed to . . . to be happening oftener. I began to get scared."

Haber leaned forward. "Why?"

Orr looked blank.

"Why scared?"

"Because I don't want to change things!" Orr said, as if stating the super-obvious. "Who am I to meddle with the way things go? And it's my unconscious mind that changes things, without any intelligent control. I tried autohypnosis but it didn't do any good. Dreams are incoherent, selfish, irrational—immoral, you said a minute ago. They come from the unsocialised part of us, don't they, at least partly? I didn't want to kill poor Ethel. I just wanted her out of my way. Well, in a dream, that's likely to be drastic. Dreams take short cuts. I killed her. In a car-crash a thousand miles away six weeks ago. I am responsible for her death."

Haber stroked his beard again. "Therefore," hhe said slowly, "the dream-suppressant drugs. So that you will avoid further responsibilities."

"Yes. The drugs kept the dreams from building up and getting vivid. It's only certain ones, very intense ones, that are . . ." he sought a word, "effective."

"Right. Okay. Now, let's see. You're unmarried; you're a draftsman for the Bonneville-Umatilla Power District. How do you like your work?"

"Fine."

"How's your sex-life?"

"Had one trial-marriage. Broke up last summer, after a couple of years."

"Did you pull out, or she?"

"Both of us. She didn't want a kid. It wasn't full-marriage material."

"And since then?"

"Well, there's some girls at my office. I'm not a, not a great stud, actually."

"How about interpersonal relationships in general? Do you feel you relate satisfactorily to other people, that you have a niche in the emotional ecology of your environment?"

"I guess so."

"So that you could say that there's

nothing really *wrong* with your life. Right? Okay. Now tell me this; do you want, do you seriously want, to get out of this drug-dependency?"

"Yes."

"Okay, good. Now, you've been taking drugs because you want to keep from dreaming. But not all dreams are dangerous; only certain vivid ones. You dreamed of your Aunt Ethel as a white cat, but she wasn't a white cat next morning—right? Some dreams are all right—safe."

He waited for Orr's assenting nod.

"Now, think about this. How would you feel about testing this whole thing out, and perhaps learning how to dream safely, without fear? Let me explain. You've got the subject of dreaming pretty loaded emotionally. You are literally afraid to dream, because you feel that some of your dreams have this capacity to affect real life, in ways you can't control. Now, that may be an elaborate and meaningful metaphor, by which your unconscious mind is trying to tell your conscious mind something about reality—your reality, your life—which you aren't ready, rationally, to accept. But we can take the metaphor quite literally; there's no need to translate it, at this point, into rational terms. Your problem at present is this: you're afraid to dream, and yet you need to dream. You tried suppression by drugs; it didn't work. Okay, let's try the opposite. Let's get you to dream, intentionally. Let's get you to dream, intensely and vividly, right here. Under my supervision, under controlled conditions. So that *you* can get control over what seems to you to have got out of hand."

"How can I dream to order?" Orr said with extreme discomfort.

"In Doctor Haber's Palace of Dreams, you can! Have you been hypnotised?"

"For dental work."

"Good. Okay. Here's the system. I put you into hypnotic trance and suggest that you're going to sleep; that your going to dream; and *what* you're going to dream. You'll wear a trancap, to ensure that you have genuine sleep, not just hypnotrance. While you're dreaming I watch you, physically and on the EEG, the whole time. I wake you, and we talk about the dream-experience. If it's gone off safely, perhaps you'll feel a bit easier about facing the next dream."

"But I won't dream effectively, here; it only happens in one dream out of dozens or hundreds." Orr's defensive rationalisations were quite consistent.

"You can dream any style dream at all, here. Dream-content and dream-affect can be controlled almost totally by a motivated subject and a properly trained hypnotiser. I've been doing it for ten years. And you'll be right there with me, because you'll be wearing a trancap. Ever worn one?"

Orr shook his head.

"You know what they are, though."

"They send a signal through electrodes that stimulates the, the brain to go along with it."

"That's roughly it. The Russians have been using it for fifty years, the Israelis refined on it, we finally climbed aboard and mass-produced it, for professional use in calming

psychotic patients and for home use in inducing sleep or alpha-trance. Now, I was working a couple of years ago with a severely depressed patient on OTT at Linnton. Like many depressives she didn't get much sleep, and was particularly short of d-state sleep, dreaming sleep; whenever she did enter the d-state she tended to wake up. Vicious cycle effect: more depression—less dreams; less dreams—more depression. Break it. How? No drug we have does much to increase d-sleep. ESB—electronic brain stimulation? but that involves implanting electrodes, and deep, for the sleep centers; rather avoid an operation. I was using the trancap on her to encourage sleep. What if you made the diffuse, low-frequency signal more specific, directed it locally to the specific area within the brain; oh yes, sure, Dr. Haber, that's a snap! But actually, once I got the requisite electronics research under my belt, it only took a couple of months to work out the basic machine. Then I tried stimulating the subject's brain with a recording of brainwaves from a healthy subject in the appropriate states, the various stages of sleep and dreaming. Not much luck. Found a signal from another brain may or may not pick up a response in the subject; had to learn to generalise, to make a sort of average, out of hundreds of normal brainwave records. Then, as I work with the patient, I narrow it down again, tailor it: whenever the subject's brain is doing what I want it to do more of, I record that moment, augment it, enlarge and prolong it, replay it, and stimulate the brain to go along with its own healthiest impulses, if you'll excuse the pun. Now all that involved an enormous amount of feedback analysis, so that a simple EEG-plus-trancap grew into this," and he gestured to the electronic forest behind Orr. He had hidden most of it behind plastic paneling, for many patients were either scared of machinery or over-identified with it, but still it took up about a quarter of the office. "That's the Dream Machine," he said with a grin, "or, prosaically, the Augmentor; and what it'll do for you is ensure that you do go to sleep, and that you dream—as briefly and lightly, or as long and intensely, as we like. Oh, incidentally, the depressive patient was discharged from Linnton this last summer as fully cured." He leaned forward. "Willing to give it a try?"

"Now?"

"What do you want to wait for?"

"But I can't fall asleep at four-thirty in the afternoon—" Then he looked foolish. Haber had been digging in the overcrowded drawer of his desk, and now produced a paper, the Consent to Hypnosis form required by HEW. Orr took the pen Haber held out, signed the form, and put it submissively down on the desk.

"All right. Good. Now, tell me this, George. Does your dentist use a hypnotape, or is he a do-it-yourself man?"

"Tape. I'm 3 on the susceptibility scale."

"Right in the middle of the graph, eh? Well, for suggestion as to dream-content to work well, we'll want fairly deep trance. We don't want a trance dream, but a genuine sleep-dream; the

Augmentor will provide that; but we want to be sure the suggestion goes pretty deep. So, to avoid spending hours in just conditioning you to enter deep trance, we'll use v-c induction. Ever seen it done?"

Orr shook his head. He looked apprehensive, but he offered no objection. There was an acceptant, passive quality about him that seemed feminine, or even childish. Haber recognised in himself a protective/bullying reaction towards this physically slight and compliant man. To dominate, to patronise him was so easy as to be almost irresistible.

"I use it on most patients. It's fast, safe, and sure—by far the best method of inducing hypnosis, and the least trouble for both hypnotist and subject." Orr would certainly have heard the scare-stories about subjects being brain-damaged or killed by over-prolonged or inept v-c induction, and though such fears did not apply here, Haber must pander to them and calm them, lest Orr resist the whole induction. So he went on with the patter, describing the fifty-year history of the v-c induction method and then veering off the subject of hypnosis altogether, back to the subject of sleep and dreams, in order to get Orr's attention off the induction process and on to the aim of it. "The gap we have to bridge, you see, is the gulf that exists between the waking or hy1notised-trance condition, and the dreaming-state. That gulf has a common name: Sleep. Normal sleep, the s-state, non-REM sleep, whichever name you like. Now, there are roughly speaking four mental states with which we're concerned: waking; trance; s-sleep; and d-state. If you look at mentation processes, the s-state, the d-state, and the hypnotic state all have something in common: sleep, dream, and trance all release the activity of the subconscious, the undermind; they tend to employ primary-process thinking, while waking mentation is secondary process—rational. But now look at the EEG records of the four states. Now it's the d-state, the trance, and the waking state that have a lot in common, while the s-state—sleep—is utterly different. And you can't get straight from trance into true d-state dreaming. The s-state must intervene. Normally, you only enter d-state four or five times a night, every hour or two, and only for a quarter of an hour at a time. The rest of the time you're in one stage or another of normal sleep. And there you'll dream, but usually not vividly; mentation in s-sleep is like an engine idling, a kind of steady muttering of images and thoughts. What we're after are the vivid, emotion-laden, memorable dreams of the d-state. Our hypnosis plus the Augmentor will ensure that we get them, get across the neurophysiological and temporal gulf of sleep, right into dreaming. So we'll need you on the couch here. My field was pioneered by Dement, Aserinsky, Berger, Oswald, Hartmann, and the rest, but the couch we get straight from Papa Freud . . . but we use it to *sleep* on, which he objected to. Now, what I want, just for a starter, is for you to sit down here on the foot of the couch. Yes, that's it. You'll be there a while, so make yourself comfortable. You said

you'd tried autohypnosis, didn't you? All right, just go ahead and use the techniques you used for that; how about deep breathing? Count ten while you inhale, hold for five; yes, right, excellent. Would you mind looking up at the ceiling, straight up over your head. Okay, right."

As Orr obediently tipped his head back, Haber, close beside him, reached out quickly and quietly and put his left hand behind the man's head, pressing firmly with thumb and one finger behind and below each ear; at the same time with right thumb and finger he pressed hard on the bared throat, just below the soft, blond beard, where the vagus nerve and carotid artery run. He was aware of the fine, sallow skin under his fingers; he felt the first startled movement of protest, then saw the clear eyes closing. He felt a thrill of enjoyment of his own skill, his instant dominance over the patient, even as he was muttering softly and rapidly, "You're going to sleep now; close your eyes, sleep, relax, let your mind go blank; you're going to sleep, you're relaxed, you're going limp; relax, let go—"

And Orr fell backward on the couch like a man shot dead, his right hand dropping lax from his side.

Haber knelt by him at once, keeping his right hand lightly on the pressure-spots and never stopping the quiet, quick flow of suggestion. "You're in trance now, not asleep but deeply in hypnotic trance, and you will not come out of it and awaken until I tell you to do so. You're in trance now, and going deeper all the time into trance, but you can still hear my voice and follow my instructions. After this, whenever I simply touch you on the throat as I'm doing now, you'll enter the hypnotic trance at once." He repeated the instructions, and went on, "Now when I tell you to open your eyes you'll do so, and see a crystal ball floating in front of you. I want you to fix your attention on it closely, and as you do so you will continue to go deeper into trance. Now open your eyes, yes, good, and tell me when you see the crystal ball."

The light eyes, now with a curious inward gaze, looked past Haber at nothing. "Now," the hypnotised man said very softly.

"Good. Keep gazing at it, and breathing regularly; soon you'll be in very deep trance . . ."

Haber glanced up at the clock. The whole business had only taken a couple of minutes. Good; he didn't like to waste time on means, getting to the desired end was the thing. While Orr lay staring at his imaginary crystal ball, Haber got up and began fitting him with the modified trancap, constantly removing and replacing it to readjust the tiny electrodes and position them on the scalp under the thick, light-brown hair. He spoke often and softly, repeating suggestions and occasionally asking bland questions, so that Orr would not drift off into sleep yet, and would stay in rapport. As soon as the cap was in place he switched on the EEG, and for a while he watched it, to see what this brain looked like.

Eight of the cap's electrodes went to the EEG; inside the machine, eight pens scored a permanent record of the brain's electrical activity. On the screen which Haber watched, the

impulses were reproduced directly, jittering white scribbles on dark grey. He could isolate and enlarge one, or superimpose one on another, at will. It was a scene he never tired of, the All Night Movie, the show on Channel One.

There were none of the sigmoid jags he looked for, the concomitant of certain schizoid personality-types. There was nothing unusual about the total pattern, except its diversity. A simple brain produces a relatively simple jigjog set of patterns and is content to repeat them; this was not a simple brain. Its motions were subtle and complex, and the repetitions neither frequent nor unvaried. The computer of the Augmentor would analyse them, but until he saw the analysis Haber could isolate no singular factor except the complexity itself.

On commanding the patient to cease seeing the crystal ball and close his eyes, he obtained almost at once a strong, clear alpha trace at 12 cycles. He played about a little more with the brain, getting records for the computer and testing hypnotic depth, and then said, "Now, John—" No; what the hell was the subject's name? "George. Now you're going to go to sleep in a minute. You're going to go sound asleep and dream; but you won't go to sleep until I say the word Antwerp; when I say that you'll go to sleep, and sleep until I say your name three times. Now when you sleep, you're going to have a dream, a good dream. One clear, pleasant dream. Not a bad dream at all, a pleasant one, but very clear and vivid. You'll be sure to remember it when you wake up. It will be about—" He hesitated a moment; he hadn't planned anything, relying on inspiration. "About a horse. A big bay horse galloping in a field. Running around. Maybe you'll ride the horse, or catch him, or maybe just watch him. But the dream will be about a horse. A vivid—" What was the word the patient had used?—"*effective* dream about a horse. After that you won't dream anything else; and when I speak your name three times you'll wake up feeling calm and rested. Now, I am going to send you to sleep by . . . saying . . . Antwerp."

Obedient, the little dancing lines on the screen began to change. They grew stronger and slower; soon the sleep-spindles of Stage 2 sleep began to appear, and a hint of the long, deep delta rhythm of Stage 4. And as the brain's rhythms changed, so did the heavy matter inhabited by that dancing energy: the hands were lax on the slow-breathing chest, the face was aloof and still.

The Augmentor had got a full record of the waking brain's patterns; now it was recording and analyzing the s-sleep patterns; soon it would be picking up the beginning of the patient's d-sleep patterns, and would be able even within this first dream to feed them back to the sleeping brain, amplifying its own emissions. Indeed it might be doing so now. Haber had expected a wait, but the hypnotic suggestion, plus the patient's long semi-deprivation of dreams, were putting him into the d-state at once: no sooner had he reached Stage 2 than he began the re-ascent. The slowly

swaying lines on the screen jittered once here and there; jigged again; began to quicken and dance, taking on a rapid, unsynchronised rhythm. Now the pons was active, and the trace from the hippocampus showed a five-second cycle, the theta rhythm, which had not showed up clearly in this subject. The fingers moved a little; the eyes under closed lids moved, watching; the lips parted for a deep breath. The sleeper dreamed.

It was 5:06.

At 5:11 Haber pressed the black OFF button on the Augmentor. At 5:12, noticing the deep jags and spindles of s-sleep reappearing, he leaned over the patient and said his name clearly thrice.

Orr sighed, moved his arm in a wide loose gesture, opened his eyes, and wakened. Haber detached the electrodes from his scalp in a few deft motions. "Feel okay?" he asked, genial and assured.

"Fine."

"And you dreamed. That much I can tell you. Can you tell me the dream?"

"A horse," Orr said huskily, still bewildered by sleep. He sat up. "It was about a horse. That one," and he waved his hand towards the picture-window-size mural that decorated Haber's office, a photograph of the great racing stallion Tammany Hall at play in a grassy paddock.

"What did you dream about it?" Haber said, pleased. He had not been sure hypno-suggestion would work on dream-content, in a first hypnosis.

"It was . . . I was walking in this field, and it was off in the distance for a while. Then it came galloping at me, and after a while I realised it was going to run me down. I wasn't scared at all, though. I figured perhaps I could catch its bridle, or swing up and ride it. I knew that actually it couldn't hurt me, because it was the horse in your picture, not a real one. It was all a sort of game. —Dr. Haber, does anything about that picture strike you as, as unusual?"

"Well, some people find it over-dramatic for a shrink's office, a bit overwhelming. A life-size sex-symbol right opposite the couch!" He laughed.

"Was it there an hour ago? I mean, wasn't that a view of Mount Hood, when I came in—before I dreamed about the horse?"

Oh Christ it had been Mount Hood the man was right

It had not been Mount Hood it could not have been Mount Hood it was a horse it was a horse

It had been a mountain

A horse it was a horse it was—

—He was staring at George Orr, staring blankly at him, several seconds must have passed since Orr's question, he must not be caught out, he must inspire confidence, he knew the answers.

"George, do you remember the picture there as being a photograph of Mount Hood?"

"Yes," Orr said in his rather sad but unshaken way. "I do. It was. Snow on it."

"Mhm." Haber nodded judicially, pondering. The awful chill at the pit of his chest had passed.

"You don't?"

The man's eyes, so elusive in color yet clear and direct in gaze: they were

the eyes of a psychotic.

"No, I'm afraid I don't. It's Tammany Hall, the triple-winner back in '89. I miss the races, it's a shame the way the lower species get crowded out by our food problems. Of course a horse is the perfect anachronism, but I like the picture; it has vigor, strength—total self-realisation in animal terms. It's a sort of ideal of what a psychiatrist strives to achieve in human psychological terms, a symbol. It's the source of my suggestion of your dream-content, of course, I happened to be looking at it . . ." Haber glanced sidelong at the mural. Of course it was the horse. "But listen, if you want a third opinion we'll ask Miss Crouch; she's worked here two years."

"She'll say it always was a horse," Orr said calmly but ruefully. "It always was. Since my dream. Always has been. I thought that maybe, since you suggested the dream to me, you might have the double memory, like me. But I guess you don't." But his eyes, no longer downcast, looked again at Haber with that clarity, that forebearance, that quiet and despairing plea for help.

The man was sick. He must be cured. "I'd like you to come again, George, and tomorrow if possible."

"Well, I work—"

"Get off an hour early, and come here at four. You're under VTT. Tell your boss, and don't feel any false shame about it. At one time or another 82% of the population gets VTT, not to mention the 31% that gets OTT. So be here at four and we'll get to work. We're going to get somewhere with this, you know. Now, here's a prescription for meprobamate; it'll keep your dreams low-keyed without suppressing the d-state entirely. You can refill it at the autodrug every three days. If you have a dream, or any other experience, that frightens you, call me, day or night. But I doubt you will, using that; and if you're willing to work hard at this with me, you won't be needing any drug much longer. You'll have this whole problem with your dreams licked, and be out in the clear. Right?"

Orr took the IBM prescription-card. "It would be a relief," he said. He smiled, a tentative, unhappy, yet not humorless smile. "Another thing about the horse," he said.

Haber, a head taller, stared down at him.

"It looks like you," Orr said.

Haber looked up quickly at the mural. It did. Big, healthy, hairy, reddish-brown, bearing down at a full gallop—

"Perhaps the horse in your dream resembled me?" he asked, shrewdly genial.

"Yes, it did," the patient said.

When he was gone, Haber sat down and looked up uneasily at the mural photograph of Tammany Hall. It really was too big for the office. God damn but he wished he could afford an office with a window with a view!

Chapter 3.

Those whom Heaven helps we call the sons of Heaven. Those who would by learning attain to this seek for what

they cannot learn. Those who would by doing attain to this seek to do what cannot be done. Those who aim by reasoning to reach it reason where reasoning has no place. To know to stop where they cannot arrive by means of knowledge is the highest attainment. Those who cannot do this will be destroyed on the lathe of Heaven.

—Chuang Tse: XXIII, 3.

GEORGE ORR left work at 3:30 and walked to the subway station; he had no car. By saving, he might have afforded a VW Steamer and the mileage tax on it, but what for? Downtown was closed to automobiles, and he lived downtown. He had learned to drive, back in the eighties, but had never owned a car. He rode the Vancouver subway back into Portland. The trains were already jampacked; he stood out of reach of strap or stanchion, supported solely by the equalising pressure of bodies on all sides, occasionally lifted right off his feet and floating as the force of crowding (c) exceeded the force of gravity (g). A man next to him holding a newspaper had never been able to lower his arms, but stood with his face muffled in the sports section. The headline, BIG A-I STRIKE NEAR AFGHAN BORDER, and the subhead, *Threat of Afghan Intervention*, stared Orr eye to I for six stops. The newspaper-holder fought his way off and was replaced by a couple of tomatoes on a green plastic plate, beneath which was an old lady in a green plastic coat who stood on Orr's left foot for three more stops.

He struggled off at the East Broadway stop, and shoved along for four blocks through the ever-thickening off-work crowd to Willamette East Tower, a great, showy, shoddy shaft of concrete and glass competing with vegetable obstinacy for light and air with the jungle of similar buildings all around it. Very little light and air got down to street level; what there was was warm, and full of fine rain. Rain was an old Portland tradition, but the warmth—70° F on the second of March—was modern, a result of air pollution. Urban and industrial effluvia had not been controlled soon enough to reverse the cumulative trends already at work in the mid-twentieth century; it would take several centuries for the CO_2 to clear out of the air, if it ever did. New York was going to be one of the larger casualties of the Greenhouse Effect, as the polar ice kept melting and the sea kept rising; indeed all Boswash was imperilled. There were some compensations. San Francisco Bay was already on the rise, and would end up covering all the hundreds of square miles of landfill and garbage dumped into it since 1848. As for Portland, with eighty miles and the Coast Range between it and the sea, it was not threatened by rising water: only by falling water.

It had always rained in western Oregon, but now it rained ceaselessly, steadily, tepidly. It was like living in a downpour of warm soup, forever.

The New Cities, Umatilla, John Day, French Glen, were east of the Cascades, in what had been desert

thirty years before. It was fiercely hot there still in summer, but it rained only 45 inches a year, compared to Portland's 114 inches. Intensive farming was possible: the desert blossomed. French Glen now had a population of seven million. Portland, with only three million and no growth potential, had been left far behind in the March of Progress. That was nothing new for Portland. And what difference did it make? Undernourishment, overcrowding, and pervading foulness of the environment were the norm. There was more scurvy, typhus and hepatitis in the Old Cities, more gang-violence, crime, and murder in the New Cities. The rats ran one and the Mafia ran the other. George Orr stayed in Portland because he had always lived there and because he had no reason to believe that life anywhere else would be better, or different.

Miss Crouch, smiling uninterestedly, showed him right in. Orr had thought that psychiatrists' offices, like rabbit holes, always had a front and a back door. This one didn't, but he doubted that patients were likely to run into one another coming and going, here. Up at the Medical School they had said that Dr. Haber had only a small psychiatric practice, being essentially a research man. That had given him the notion of someone successful and exclusive, and the doctor's jovial, masterful manner had confirmed it. But today, less nervous, he saw more. The office didn't have the platinum-and-leather assurance of financial success, nor the rag-and-bottle assurance of scientific disinterest. The chairs and couch were vinyl, the desk was metal plasticoated with a wood finish. Nothing whatever was genuine. Dr. Haber, white-toothed, bay-maned, huge, boomed out, "Good afternoon!"

That geniality was not faked; but it was exaggerated. There was a warmth to the man, an outgoingness, which was real; but it had got plasticoated with professional mannerisms, distorted by the doctor's unspontaneous use of himself. Orr felt in him a wish to be liked and a desire to be helpful; the doctor was not, he thought, really sure that anyone else existed, and wanted to prove they did by helping them. He boomed "Good afternoon!" so loud because he was never sure he would get an answer. Orr wanted to say something friendly, but nothing personal seemed suitable; he said, "It looks as if Afghanistan might get into the war."

"Mhm, that's been in the cards since last August." He should have known that the doctor would be better informed on world affairs than himself; he was generally semi-informed and three weeks out of date. "I don't think that'll shake the Allies," Haber went on, "unless it pulls Pakistan in on the Iranian side. Then India may have to send in more than token support to the Isragypts." That was teleglot for the New Arab Republic/Israel alliance. "I think Gupta's speech in Delhi shows that he's preparing for that eventuality."

"It keeps spreading," Orr said, feeling inadequate and despondent. "The war, I mean."

"Does it worry you?"

"Doesn't it worry you?"

"Irrelevant," said the doctor, smiling his broad, hairy, bear's smile, like a big bear-god; but he was still wary, since yesterday.

"Yes, it worries me." But Haber had not earned that answer; the questioner cannot withdraw himself from the question, assuming objectivity—as if the answerer were an object. Orr did not speak these thoughts, however; he was in a doctor's hands, and surely the doctor knew what he was doing.

Orr had a tendency to assume that people knew what they were doing, perhaps because he generally assumed that he did not.

"Sleep well?" Haber inquired, sitting down under the left rear hoof of Tammany Hall.

"Fine, thanks."

"How do you feel about another go in the Palace of Dreams?" He was watching keenly.

"Sure, that's what I'm here for, I guess."

He saw Haber rise and come around the desk; he saw the large hand come out towards his neck; and then nothing happened.

". . . George . . ."

His name. Who called? No voice he knew. Dry land, dry air, the crash of a strange voice in his ear. Daylight, and no direction. No way back. He woke.

The half-familiar room; the half-familiar, big man, in his voluminous russet gernreich, with his redbrown beard, and white smile, and opaque dark eyes. "It looked like a short dream but a lively one, on the EEG," said the deep voice. "Let's have it. Sooner the recall, the completer it is."

Orr sat up, feeling rather dizzy. He was on the couch; how had he got there? "Let's see. It wasn't much. The horse again. Did you tell me to dream of the horse again, when I was hypnotised?"

Haber shook his head, meaning neither yes nor no, and listened.

"Well, this was a stable. This room. Straw and a manger and a pitchfork in the corner, and so on. The horse was in it. He . . ."

Haber's expectant silence permitted no evasion.

"He did this tremendous pile of shit. Brown, steaming. Horseshit. It looked kind of like Mount Hood, with that little hump on the north side and everything. It was all over the rug, and sort of encroaching on me, so I said, 'It's only the picture of the mountain.' Then I guess I started to wake up."

Orr raised his face, looking past Dr. Haber at the mural behind him, the wall-sized photograph of Mount Hood.

It was a serene picture in rather muted, arty tones: the sky grey, the mountain a soft brown or reddish-brown, with speckles of white near the summit, and the foreground all dusky, formless treetops.

The doctor was not looking at the mural. He was watching Orr with those keen, opaque eyes. He laughed when Orr was done, not long or loudly, but perhaps a little excitedly.

"We're getting somewhere, George!"

"Where?"

Orr felt rumpled and foolish, sitting on the couch still giddy from sleep, having lain asleep there, probably with his mouth open and snoring, helpless, while Haber watched the secret jigs

and prancings of his brain, and told him what to dream. He felt exposed, used. And to what end?

Evidently the doctor had no memory at all of the horse-mural, nor of the conversation they had had concerning it; he was altogether in this new present, and all his memories led to it. So he could not do any good at all. But he was striding up and down the office now, talking even louder than usual. "Well! *a*, you can and do dream to order, you follow the hypno-suggestions; *b*, you respond splendidly to the Augmentor. Therefore we can work together, fast and efficiently, without narcosis. I'd rather work without drugs. What the brain does by itself is infinitely more fascinating and complex than any response it can make to chemical stimulation; that's why I developed the Augmentor, to provide the brain a means of *self*-stimulation. The creative and therapeutic resources of the brain—whether waking or sleeping or dreaming—are practically infinite. If we can just find the keys to all the locks. The power of dreaming alone is quite undreamt of!" He laughed his big laugh; he had made that little joke many times. Orr smiled uncomfortably, it struck a bit close home. "I am sure now that your therapy lies in this direction, to *use* your dreams not to evade and avoid them. To face your fear and, with my help, see it through. You're afraid of your own mind, George. That's a fear no man can live with. But you don't have to. You haven't seen the help your own mind can give you, the ways you can use it, employ it creatively. All you need to do is, not to hide from your own mental powers, not to suppress them, but to release them. This we can do together. Now, doesn't that strike you as right, as the right thing to do?"

"I don't know," Orr said.

When Haber spoke of using, employing his mental powers, he had thought for a moment that the doctor must mean his power of changing reality by dreaming; but surely if he'd meant that he would have said it clearly? Knowing that Orr desperately needed confirmation, he would not causelessly withhold it if he could give it.

Orr's heart sank. The use of narcotics and pep-pills had left him emotionally off-balance; he knew that, and therefore kept trying to combat and control his feelings. But this disappointment was beyond his control. He had, he now realised, allowed himself a little hope. He had been *sure*, yesterday, that the doctor was aware of the change from mountain to horse. It hadn't surprised or alarmed him that Haber tried to hide his awareness, in the first shock; no doubt he had been unable to admit it even to himself, to encompass it. It had taken Orr himself a long time to bring himself to face the fact that he was doing something impossible. Yet he had let himself hope that Haber, knowing the dream, and being there as it was dreamed, at the center, might see the change: might remember and confirm.

No good. No way out. Orr was where he had been for months; alone: knowing he was insane and knowing he was not insane, simultaneously and intensely. It was enough to drive him

insane.

"Would it be possible," he said diffidently, "for you to give me a post-hypnotic suggestion not to dream effectively? Since you can suggest that I *do* . . . That way I could get off drugs, at least for a while."

Haber settled down behind his desk, hunched like a bear. "I very much doubt it would work, even through one night," he said quite simply, and then suddenly booming again, "Isn't that the same, fruitless direction you've been trying to go, George? Drugs or hypnosis, it's still suppression. You can't run away from your own mind. You see that, but you're not quite willing yet to face it. That's all right. Look at it this way: twice now you've dreamed, right here, on that couch. Was it so bad? Did it do any harm?"

Orr shook his head, too low-spirited to answer.

Haber went on talking, and Orr tried to give him his attention. He was talking now about daydreams, about their relationship to the hour-and-a-half dreaming cycles of the night, about their uses and value. He asked Orr if any particular type of daydream was congenial to him. "For example," he said, "I frequently daydream heroics. I am the hero. I'm saving a girl, or a fellow-astronaut, or a besieged city, or a whole damn planet. Messiah dreams, do-gooder dreams. Haber saves the world! They're a hell of a lot of fun—so long as I keep 'em where they belong. We all need that ego boost we get from daydreams, but when we start relying on it, then our reality-parameters are getting a bit shaky . . . Then there's the South Sea Island type daydreams—a lot of middle-aged executives go in for them. And the noble-suffering-martyr type, and the various romantic fantasies of adolescence, and the sado-masochist daydream, and so on. Most people recognize most types. We've almost all been in the arena facing the lions, at least once, or thrown a bomb and destroyed our enemies, or rescued the pneumatic virgin from the sinking ship, or written Beethoven's Tenth Symphony for him. Which style do you favor?"

"Oh—escape," Orr said. He really had to pull himself together and answer this man, who was trying to help him. "Getting away. Getting out from under."

"Out from under the job, the daily grind?"

Haber seemed to refuse to believe that he was contented with his job. No doubt Haber had a lot of ambition, and found it hard to believe that a man could be without it.

"Well, it's more the city, the crowding, I mean. Too many people everywhere. The headlines. Everything."

"South Seas?" Haber inquired with his bear's grin.

"No. Here. I'm not very imaginative. I daydream about having a cabin somewhere outside the cities, maybe over in the Coast Range where there's still some of the old forests."

"Ever consider actually buying one?"

"Recreation land is about 38,000 dollars an acre in the cheapest areas, down in the South Oregon Wilderness. Goes up to about four hundred

thousand for a lot with a beach view."

Haber whistled. "I see you have considered—and so returned to your daydreams. Thank God they're free, eh! Well, are you game for another go? We've got nearly half an hour left."

"Could you . . .?"

"What, George?"

"Let me keep recall."

Haber began one of his elaborate refusals. "Now as you know, what is experienced during hypnosis, including all directions given, is normally blocked to waking recall by a mechanism similar to that which blocks recall of 99% of our dreams. To lower that block would be to give you too many conflicting directions concerning what is a fairly delicate matter, the content of a dream you haven't yet dreamed. That—the dream—I can direct you to recall. But I don't want your recall of my suggestions all mixed up with your recall of the dream you actually dream. I want to keep 'em separate, to get a clear report of what you did dream, not what you think you ought to have dreamed. Right? You can trust me, you know. I'm in this game to help you. I won't ask too much of you. I'll push you, but not too hard or too fast. I won't give you any nightmares! Believe me, I want to see this through, and understand it, as much as you do. You're an intelligent and cooperative subject, and a courageous man to have borne so much anxiety alone so long. We'll see this through, George. Believe me."

Orr did not entirely believe him, but he was as uncontradictable as a preacher; and besides, he wished he could believe him.

He said nothing, but lay back on the couch, and submitted to the touch of the great hand on his throat.

"Okay! There you are! What did you dream, George? Let's have it hot off the griddle."

He felt sick and stupid.

"Something about the South Seas . . . coconuts . . . can't remember." He rubbed his head, scratched under his short beard, took a deep breath. He longed for a drink of cold water. "Then I . . . dreamed that you were walking with John Kennedy, the president, down Alder Street I think it was. I was sort of coming along behind, I think I was carrying something for one of you. Kennedy had his umbrella up—I saw him in profile, like the old fifty-cent pieces—and you said, 'You won't be needing that any more, Mr. President,' and took it out of his hand. He seemed to get annoyed over it, he said something I couldn't understand. But it had stopped raining, the sun came out, and so he said, 'I suppose you're right now.'—It *has* stopped raining."

"How do you know?"

Orr sighed. "You'll see when you go out. Is that all for this afternoon?"

"I'm ready for more. Bill's on the Government, you know!"

"I'm very tired."

"Well, all right then, that wraps it up for today. Listen, what if we had our sessions at night? Let you go to sleep normally, use the hypnosis only to suggest dream-content. It'd leave your working days clear, and my working day *is* night, half the time; one thing sleep-researchers seldom do is

sleep! It would speed us up tremendously, and save your having to use any dream-suppressant drugs. You want to give it a try? How about Friday night?"

"I've got a date," Orr said and was startled at his lie.

"Saturday, then."

"All right."

He left, carrying his damp raincoat over his arm. There was no need to wear it. The Kennedy dream had been a strong effective. He was sure of them now, when he had them. No matter how bland their content, he woke from them recalling them with intense clarity, and feeling broken and abraded, as one might after making an enormous physical effort to resist an overwhelming, battering force. On his own, he had not had one oftener than once a month or once in six weeks; it had been the *fear* of having one that had obsessed him. Now, with the Augmentor keeping him in dreaming-sleep, and the hypnotic suggestions insisting that he dream effectively, he had had three effective dreams out of four in two days; or, discounting the coconut dream, which had been rather what Haber called a mere muttering of images, three out of three. He was exhausted.

It was not raining. When he came out of the portals of Willamette East Tower, the March sky was high and clear above the street-canyons. The wind had come round to blow from the east, the dry desert wind that from time to time enlivened the wet, hot, sad, grey weather of the Valley of the Willamette.

The clearer air roused his spirits a bit. He straightened his shoulders and set off, trying to ignore a faint dizziness that was probably the combined result of fatigue, anxiety, two brief naps at an unusual time of day, and a 62-storey descent by elevator.

Had the doctor told him to dream that it had stopped raining? Or had the suggestion been to dream about Kennedy (who had, now that he thought about it again, had Abraham Lincoln's beard)? Or about Haber himself? He had no way of telling. The effective part of the dream had been the stopping of the rain, the change of weather; but that proved nothing. Often it was not the apparently striking or salient element of a dream which was the effective one. He suspected that Kennedy, for reasons known only to his subconscious mind, had been his own addition, but he could not be sure.

He went down into the East Broadway subway station with the endless others. He dropped his five-dollar piece in the ticket machine, got his ticket, got his train, entered darkness under the river.

The dizziness increased in his body and in his mind.

To go under a river: there's a strange thing to do, a really weird idea.

To cross a river, ford it, wade it, swim it, use boat, ferry, bridge, airplane, to go upriver, to go downriver in the ceaseless renewal and beginning of current: all that makes sense. But in going under a river, something is involved which is in the central meaning of the word *perverse*. There are roads in the mind and outside it the mere elaborateness of which shows plainly that, to have got into this, a

wrong turning must have been taken way back.

There were nine train and truck tunnels under the Willamette, sixteen bridges across it, and concrete banks along it for twenty-seven miles. Flood-control both on it and its great confluent the Columbia, a few miles downstream from central Portland, was so highly developed that neither river could rise more than five inches even after the most prolonged torrential rains. The Willamette was a useful element of the environment, like a very large, docile draft-animal harnessed with straps, chains, shafts, saddles, bits, girths, hobbles. If it hadn't been useful of course it would have been concreted over, like the hundreds of little creeks and streams that ran in darkness down from the hills of the city under the streets and buildings. But without it, Portland would not have been a port; the ships, the long strings of barges, the big rafts of lumber, still came up and down it. So the trucks and trains and the few private cars had to go over the river or under it. Above the heads of those now riding the GPRT train in the Broadway Tunnel were tons of rock and gravel, tons of water running; the piles of wharves and the keels of ocean-going ships, the huge concrete supports of elevated freeway-bridges and approaches, a convoy of steamer-trucks laden with frozen battery-produced chickens, one jet plane at 34,000 feet, the stars at 4.3+ lightyears. George Orr, pale in the flickering fluorescent glare of the train-car in the infrafluvial dark, swayed as he stood holding a swaying steel handle on a strap among a thousand other souls. He felt the heaviness upon him, the weight bearing down endlessly. He thought, I am living in a nightmare, from which from time to time I wake in sleep.

The smash and jostle of people getting off at the Union Station stop knocked this sententious notion out of his mind; he concentrated wholly on keeping hold of the handle on the strap. Still feeling giddy, he was afraid that if he lost hold and had to submit entirely to force (c), he might get sick.

The train started up again with a noise evenly compounded of deep abrasive roars and high piercing screams. The whole GPRT system was only fifteen years old, but it had been built late and hastily, with inferior materials, during, not before, the crack-up of the private car economy. In fact the train-cars had been built in Detroit; and they lasted like it, and sounded like it. A city man and subway-rider, Orr did not even hear the appalling noise. His aural nerve-endings were in fact considerably dulled in sensitivity though he was only thirty, and in any case the noise was merely the usual background of the nightmare. He was thinking again, having established his claim to the handle of the strap.

Ever since he had got interested in the subject perforce, the mind's lack of recall of most dreams had puzzled him. Non-conscious thinking, whether in infancy or in dream, apparently is not available to conscious recall. But was he unconscious during hypnosis? Not at all: wide awake, until told to sleep. Why could he not remember, then? It worried him. He wanted to know what Haber was doing. The first dream this

afternoon, for example: had the doctor merely told him to dream about the horse again? and he himself had added the horseshit, which was embarrassing. Or, if the doctor had specified the horseshit, that was embarrassing in a different way. And perhaps Haber was lucky that he hadn't ended up with a big brown steaming pile of manure on the office carpeting. In a sense, of course, he had: the picture of the mountain.

Orr stood upright as if he had been goosed, as the train screamed into Alder Street Station. The mountain, he thought, as sixty-eight people pushed and shoved and scraped past him to the doors. The mountain. He told me to put back the mountain in my dream. So I had the horse put back the mountain. But if he told me to put back the mountain then he *knew it had been there before the horse*. He knew. He did see the first dream change reality. He saw the change. He believes me. I am *not* insane!

So great a joy filled Orr that, among the forty-two persons who had been jamming into the car as he thought these things, the seven or eight pressed closest to him felt a slight but definite glow of benevolence or relief. The woman who had failed to get his strap-handle away from him felt a blessed surcease of the sharp pain in her corn; the man squashed against him on the left thought suddenly of sunlight; the old man sitting crouched directly in front of him forgot, for a little, that he was hungry.

Orr was not a fast reasoner. In fact he was not a reasoner. He arrived at ideas the slow way, never skating over the clear, hard ice of logic, nor soaring on the slipstreams of imagination, but slogging, plodding along on the heavy ground of existence. He did not see connections, which is said to be the hallmark of intellect. He *felt* connections—like a plumber. He was not really a stupid man, but he did not use his brains half as much as he might have done, or half as fast. It was not until he had got off the subway at Ross Island Bridge West, and had walked up the hill several blocks and taken the elevator eighteen floors to his one-room 8½x11 flat in the twenty-storey independent income steel-and-sleazy-concrete Corbett Condominium (Budget Living in Style Down Town!), and had put a soybeanloaf slice in the infrabake, and had taken a beer out of the wallfridge, and had stood some while at his window—he paid double for an outside room—looking up at the West Hills of Portland crammed with huge glittering towers, heavy with lights and life, that he thought at last: "Why didn't Dr. Haber *tell* me that he knows I dream effectively?

He mulled over this a while. He slogged around it, tried to lift it, found it very bulky.

He thought: Haber knows, now, that the mural has changed twice. Why didn't he say anything? He must know I was afraid of being insane. He says he's helping me. It would have helped a lot if he'd told me that he can see what I see, told me that it's not just delusion.

He knows now, Orr thought after a long slow swallow of beer, that it's stopped raining. He didn't go to see, though, when I told him it had. Maybe

he was afraid to. That's probably it. He's scared by this whole thing and wants to find out more before he tells me what he really thinks about it. Well, I can't blame him. If he wasn't scared of it, that would be the odd thing.

But I wonder, once he gets used to the idea, what he'll do . . . I wonder how he'll stop my dreams, how he'll keep me from changing things. I've got to stop; this is far enough, far enough . . .

He shook his head and turned away from the bright, life-encrusted hills.

Chapter 4.

Nothing endures, nothing is precise and certain (except the mind of a pedant), perfection is the mere repudiation of that. ineluctable marginal inexactitude which is the mysterious inmost quality of Being.

—*H. G. Wells*, A Modern Utopia

THE LAW OFFICE of Forman, Esserbeck, Goodhue and Rutti was in a 1973 automobile-parking-structure, converted to human use. Many of the older buildings of downtown Portland were of this lineage. At one time indeed most of downtown Portland had consisted of places to park automobiles. At first these had mostly been plains of asphalt punctuated by paybooths or parking meters, but as the population went up, so had they. Indeed the automatic-elevator parking-structure had been invented in Portland, long long ago; and before the private car strangled in its own exhaust, ramp-style parking buildings had gone up to fifteen and twenty stories. Not all these had been torn down since the eighties to make room for highrise office and apartment buildings: some had been converted. This one, 209 S.W. Burnside, still smelled of ghostly gasoline fumes. Its cement floors were stained with the excreta of innumerable engines, the wheelprints of the dinosaurs were fossilised in the dust of its echoing halls. All the floors had a curious slant, an askewness, due to the basic helical-ramp construction of the building; in the offices of Forman, Esserbeck, Goodhue and Rutti, one was never entirely convinced that one was standing quite upright.

Miss Lelache sat behind the screen of bookcases and files that semi-separated her semi-office from Mr. Pearl's semi-office, and thought of herself as a Black Widow.

There she sat, poisonous; hard, shiny, and poisonous; waiting, waiting.

And the victim came.

A born victim. Hair like a little girl, brown and fine; little blond beard; soft white skin like a fish's belly; meek, mild, stuttering. Shit! If she stepped on him he wouldn't even crunch.

"Well I, I think it's a, it's a matter of, of rights of privacy sort of," he was saying. "Invasion of privacy, I mean. But I'm not sure. That's why I wanted advice."

"Well. Shoot," said Miss Lelache.

The victim could not shoot. His stuttering pipe had dried up.

"You're under Voluntary Therapeutic Treatment," Miss Lelache said, referring to the note Mr.

Esserbeck had sent in previously, "for infraction of Federal regulations controlling dispensation of medications at autodrugstores."

"Yes. If I agree to psychiatric treatment I won't get prosecuted."

"That's the gist of it, yes," the lawyer said dryly. The man struck her as not exactly feebleminded, but revoltingly simple. She cleared her throat.

He cleared his throat. Monkey see, monkey do.

Gradually, with a lot of backing and filling, he explained that he was undergoing a therapy which consisted essentially of hypnotically induced sleep and dreaming. He felt that the psychiatrist, by ordering him to dream certain dreams, might be infringing upon his rights of privacy as defined in the New Federal Constitution of 1984.

"Well. Something like this came up last year in Arizona," said Miss Lelache. "Man under VTT tried to sue his therapist for implanting homosexual tendencies in him. Of course the shrink was simply using standard conditioning techniques, and the plaintiff actually was a terrific repressed homo; he got arrested for trying to bugger a twelve-year-old boy in broad daylight in the middle of Phoenix Park, before the case even got to court. He wound up in Obligatory Therapy in Tehachapi. Well. What I'm getting at, is that you've got to be cautious in making this sort of allegation. Most psychiatrists who get Government referrals are cautious men themselves, respectable practitioners. Now if you can provide any instance, any occurrence, that might serve as real evidence; but mere suspicions won't do. In fact, they might land you in Obligatory, that's the Mental Hospital in Linnton; or in jail."

"Could they . . . maybe just give me another psychiatrist?"

"Well. Not without real cause. The Medical School referred you to this Haber; and they're good up there, you know. If you brought a complaint against Haber the men who heard it as specialists would very likely be Med School men, probably the same ones that interviewed you. They won't take a patient's word against a doctor's with no evidence. Not in this kind of case."

"A mental case," the client said sadly.

"Exactly."

He said nothing for a while. At last he raised his eyes to hers, clear, light eyes, a look without anger and without hope; he smiled and said, "Thank you very much, Miss Lelache. I'm sorry to have wasted your time."

"Well, wait!" she said. He might be simple, but he certainly didn't look crazy; he didn't even look neurotic. He just looked desperate. "You don't have to give up quite so easily. I didn't say that you have no case. You say that you do want to get off drugs, and that Dr. Haber is giving you a heavier dose of phenobarb, now, than you were taking on your own; that might warrant investigation. Though I strongly doubt it. But defense of rights of privacy is my special line, and I want to know if there's been a breach of privacy. I just said you hadn't *told* me your case—if you have one. What, specifically, has this doctor done?"

"If I tell you," the client said with

mournful objectivity, "you'll think I'm crazy."

"How do you know I will?"

Miss Lelache was counter-suggestible, an excellent quality in a lawyer, but she knew she carried it a bit far.

"If I told you," the client said in the same tone, "that some of my dreams exert an influence over reality, and that Dr. Haber has discovered this and is using it . . . this talent of mine, for ends of his own, without my consent . . . you'd think I was crazy. Wouldn't you?"

Miss Lelache gazed at him a while, her chin on her hands. "Well. Go on," she said at last, sharply. He was quite right about what she was thinking, but damned if she was going to admit it. Anyway so what if he was crazy? What sane person could live in this world and not be crazy?

He looked down at his hands for a minute, evidently trying to collect his thoughts. "You see," he said, "he has this machine. A device like the EEG recorder, but it provides a kind of analysis and feedback of the brain-waves."

"You mean he's a Mad Scientist with an infernal machine?"

The client smiled feebly. "I make it sound that way. No, I believe that he has a very good reputation as a research scientist, and that he's genuinely dedicated to helping people. I'm sure he doesn't intend any harm to me or anyone. His motives are very high." He encountered the disenchanted gaze of the Black Widow a moment, and stuttered. "The, the machine. Well, I can't tell you how it

works, but anyway he's using it on me to keep my brain in the d-state, he calls it, that's one term for the kind of special sleep you have when you're dreaming. It's quite different from ordinary sleep. He sends me to sleep hypnotically, and then turns this machine on so that I start dreaming at once—one doesn't usually. Or that's how I understand it. The machine makes sure that I dream, and I think it intensifies the dream-state too. And then I dream what he's told me to dream in hypnosis."

"Well. It sounds like a foolproof method for an old-fashioned psychoanalyst to get dreams to analyse. But instead of that he's telling you what to dream, by hypnotic suggestion? So I assume he's conditioning you via dreams, for some reason. Now, it's well established that under hypnotic suggestion a person can and will do almost anything, whether or not his conscience would permit it in a normal state: that's been known since the middle of the last century, and legally established since Somerville vs. Projansky in '88. Well. Do you have any grounds for believing that this doctor has been using hypnosis to suggest that you perform anything dangerous, anything you'd find it normally repugnant to do?"

The client hesitated. "Dangerous, yes. If you accept that a dream can be dangerous. But he doesn't direct me to *do* anything. Only to *dream* them."

"Well, are the dreams he suggests morally repugnant to you?"

"He s not . . . not an evil man. He means well. What I object to is his using me as an instrument, a means—even if his ends are good. I can't judge him—my own dreams had immoral effects, that's why I tried to suppress them with drugs, and got into this mess. And I want to get out of it, to get off drugs, to be cured. But he's not curing me. He's *encouraging* me."

After a pause Miss Lelache said, "To do what?"

"To change reality by dreaming that it's different," the client said, doggedly, without hope.

Miss Lelache sank the point of her chin between her hands again, and stared for a while at the blue clipbox on her desk at the very nadir of her range of vision. She glanced up surreptitiously at the client. There he sat, mild as ever, but she now thought that he certainly wouldn't squash if she stepped on him, nor crunch, nor even crack. He was peculiarly solid.

People who come to a lawyer tend to be on the defensive if not on the offensive; they are, naturally, out for something—a legacy, a property, an injunction, a divorce, a committal, whatever. She could not figure what this fellow, so inoffensive and defenseless, was out for. He made no sense at all and yet he didn't *sound* as if he wasn't making sense.

"All right," she said cautiously. "So what's wrong with what he's making your dreams do?"

"I have no right to change things. Nor he to make me do it."

God, he really believed it, he was completely off the deep end. And yet his moral certainty hooked her, as if she were a fish swimming around in the deep end too.

"Change things how? What things?

Give me an example!" She felt no mercy for him, as she should have felt for a sick man, a schiz or paranoid with delusions of manipulating reality. Here was "another casualty of these times of ours that try men's souls," as President Merdle, with his happy faculty for fouling a quotation, had said in his State of the Union message; and here she was being mean to a poor lousy bleeding casualty with holes in his brain. But she didn't feel like being kind to him. He could take it.

"The cabin," he said, having pondered a little. "My second visit to him, he was asking about daydreams, and I told him that sometimes I had daydreams about having a place in the Wilderness Areas, you know, a place in the country like in old novels, a place to get away to. Of course I didn't have one. Who does? But last week, he must have directed me to dream that I did. Because now I do. A 33-year lease cabin on Government land, over in the Siuslaw National Forest, near the Neskowin. I rented a batcar and drove over Sunday to see it. It's very nice. But . . ."

"Why shouldn't you have a cabin? Is that immoral? Lots of people have been getting into those lotteries for those leases, since they opened up some of the Wilderness Areas for them last year. You're just lucky as hell."

"But I didn't have one," he said. "Nobody did. The Parks and Forests were reserved strictly as wilderness, what there is left of them, with camping only around the borders. There were no Government lease cabins. Until last Friday. When I dreamed that there were."

"But look, Mr. Orr, I *know*—"

"I know you know," he said gently. "I know too. All about how they decided to lease parts of the National Forests, last spring. And I applied, and got a winning number in the lottery, and so on. Only I also know that that was not true until last Friday. And Dr. Haber knows it too."

"Then your dream last Friday," she said jeering, "changed reality retrospectively for the entire State of Oregon and affected a decision in Washington last year and erased everybody's memory but yours and your doctor's? Some dream! Can you remember it?"

"Yes," he said, morose but firm. "It was about the cabin, and the creek that's in front of it. I don't expect you to believe all this, Miss Lelache. I don't think even Dr. Haber has really caught onto it yet; he won't wait and get the feel of it. If he did he might be more cautious about it. You see, it works like this. If he told me under hypnosis to dream that there was a pink dog in the room, I'd do it; but the dog couldn't be there so long as pink dogs aren't in the order of nature, aren't part of reality. What would happen is, either I'd get a white poodle dyed pink, and some plausible reason for its being there. Or, if he insisted that it be a genuine pink dog, then my dream would have to change the order of nature to include pink dogs. Everywhere. Since the Pleistocene or whenever dogs first appeared. They would always have come black, brown, yellow, white, and pink. And one of the pink ones would have wandered in from the hall; or would be his collie, or his receptionist's

pekinese, or something. Nothing miraculous. Nothing unnatural. Each dream covers its tracks completely. There would just be a normal everyday pink dog there when I woke up, with a perfectly good reason for being there. And nobody would be aware of anything new, except me—and him. I keep the two memories, of the two realities. So does Dr. Haber. He's there at the moment of change, and knows what the dream's about. He doesn't admit that he knows, but I know he does. For everybody else, there have always been pink dogs. For me, and him, there have: and there haven't."

"Dual time tracks, alternate universes," Miss Lelache said. "Do you see a lot of old late-night T.V. shows?"

"No," said the client, almost as dryly as she. "I don't ask you to believe this. Certainly not without evidence."

"Well. Thank God!"

He smiled, almost a laugh. He had a kind face; he looked, for some reason, as if he liked her.

"But look, Mr. Orr, how the hell can I get any evidence about your *dreams?* Particularly if you destroy all the evidence every time you dream by changing everything ever since the Pleistocene?"

"Can you," he said, suddenly intense, as if hope had come into him, "can you, acting as my lawyer, ask to be present at one of my sessions with Dr. Haber—if you were willing?"

"Well. Possibly. It could be managed, if there's good cause. But look, calling in a lawyer as witness in the event of a possible privacy-infringement case is going to absolutely wreck your therapist-patient relationship. Not that it sounds like you've got a very good one going, but that's hard to judge from outside. The fact is, you have to trust him, and also, you know, he has to trust you, in a way. If you throw a lawyer at him because you want to get him out of your head, well, what can he do? Presumably he's trying to help you."

"Yes. But he's using me for experimental—" Orr got no further: Miss Lelache had stiffened, the spider had seen, at last, her prey.

"Experimental purposes? Is he? What? This machine you talked about—is it experimental? Has it HEW approval? What have you signed, any releases, anything beyond the VTT forms and the hypnosis-consent form? Nothing? That sounds like you might have just cause for complaint, Mr. Orr."

"You might be able to come observe a session?"

"Maybe. The line to follow would be civil rights, of course, not privacy."

"You do understand that I'm not trying to get Dr. Haber into trouble?" he said, looking worried. "I don't want to do that. I know he means well. It's just that I want to be cured, not used."

"If his motives are good, and if he s using an experimental device on a human subject, then he should take it quite as a matter of course, without resentment; if it's on the level he won't get into any trouble. I've done jobs like this twice. Hired by HEW to do it. Watched a new hypnosis-inducer in practice up at the Med School, it didn't work, and watched a demonstration of how to induce agoraphobia by suggestion, so people will be happy in

crowds, out at the Institute in Forest Grove. That one worked but didn't get approved; it came under the brainwashing laws, we decided. Now, I can probably get an HEW order to investigate this thingummy your doctor's using. That lets you out of the picture. I don't come on as your lawyer at all. In fact maybe I don't even know you. I'm an official accredited ACLU observer for HEW. Then, if we don't get anywhere with this, that leaves you and him in the same relationship as before. The only catch is, I've got to get invited to one of *your* sessions."

"I'm the only psychiatric patient he's using the Augmentor on; he told me so. He said he's still working on it—perfecting it."

"It really is experimental, whatever he's doing to you with it, then. Good. All right. I'll see what I can do. It'll take a week or more to get the forms through."

He looked distressed.

"You won't dream me out of existence this week, Mr. Orr," she said, hearing her chitinous voice, clicking her mandibles.

"Not willingly," he said, with gratitude—no, by God, it wasn't gratitude, it was liking. He liked her. He was a poor damn crazy psycho on drugs; he *would* like her. She liked him. She stuck out her brown hand, he met it with a white one, just like that damn button her mother always kept in the bottom of her bead-box, SCNN or SNCC or something she'd belonged to way back in the middle of the last century, the Black hand and the White hand joined together. Christ!

Chapter 5.

When the Great Way is lost, we get benevolence and righteousness.

—Lao Tse, XVIII

SMILING, William Haber strode up the steps of the Oregon Oneirological Institute, and through the high, polarised-glass doors into the dry cool of the airconditioning. It was only March 24th, and already like a sauna-bath outside: but within all was cool, clean, serene. Marble floor, discreet furniture, reception-desk of brushed chrome, well-enamelled receptionist: "Good morning, Dr. Haber!"

In the hall Atwood passed him, coming from the research wards, red-eyed and tousled from a night of monitoring sleepers' EEGs; the computers did a lot of that now, but there were still times an unprogrammed mind was needed. "Morning, Chief," Atwood mumbled.

And from Miss Crouch in his own office, "*Good* morning, Doctor!" He was glad he'd brought Penny Crouch with him when he moved to the office of Director of the Institute last year. She was loyal and clever, and a man at the head of a big and complex research institution needs a loyal and clever woman in his outer office.

He strode on into the inner sanctum.

Dropping briefcase and file-folders on the couch, he stretched his arms, and then went over, as he always did when he first entered his office, to the window. It was a large corner window, looking out east and north over a great sweep of world: the curve of the much-

bridged Willamette close in beneath the hills; the city's countless towers high and milky in the spring mist, on either side of the river; the suburbs receding out of sight till from their remote outbacks the foothills rose; and the mountains. Hood, immense yet withdrawn, breeding clouds about her head; going northward, the distant Adams, like a molar tooth; and then the pure cone of St. Helens, from whose long grey sweep of slope still farther northward a little bald dome stuck out, like a baby looking round its mother's skirt: Mount Rainier.

It was an inspiring view. It never failed to inspire Dr. Haber. Besides, after a week's solid rain, barometric pressure was up and the sun was out again, above the river-mist. Well aware from a thousand EEG readings of the links between the pressure of the atmosphere and the heaviness of the mind, he could almost feel his psychosoma being buoyed up by that bright, drying wind. Have to keep that up, keep the climate improving, he thought rapidly, almost surreptitiously. There were several chains of thought formed or forming in his mind simultaneously, and this mental note was not part of any of them. It was quickly made and as quickly filed away in memory, even as he snapped on his desk recorder and began to dictate one of the many letters that the running of a Government-connected science research institute entailed. It was hackwork, of course, but it had to be done, and he was the man to do it. He did not resent it, though it cut drastically into his own research time. He was in the labs only for five or six hours a week now, usually, and had only one patient of his own, though of course he was supervising the therapy of several others.

One patient, however, he did keep. He was a psychiatrist, after all. He had gone into sleep-research and oneirology in the first place to find therapeutic applications. He was not interested in detached knowledge, science for science's sake: there was no use learning anything if it was of no use. Relevance was his touchstone. He would always keep one patient of his own, to remind him of that fundamental commitment, to keep him in contact with the human reality of his research in terms of the disturbed personality-structure of individual people. For there is nothing important except people. A person is defined solely by the extent of his influence over other people, by the sphere of his interrelationships; and morality is an utterly meaningless term unless defined as the good one does to others, the fulfilling of one's function in the socio-political whole.

His current patient, Orr, was coming in at four this afternoon, for they had given up the attempt at night-sessions; and, as Miss Crouch reminded him at lunch-time, an HEW inspector was going to observe today's session, making sure there was nothing illegal, immoral, unsafe, unkind, unetc., about the operation of the Augmentor. God damn Government prying.

That was the trouble with success, and its concimitants of publicity, public curiosity, professional envy, peer-group rivalry. If he'd still been a private researcher, plugging along in

the sleep-lab at P.S.U. and a second-rate office in Willamette East Tower, chances were that nobody would have taken any notice of his Augmentor until he decided it was ready to market, and he would have been let alone to refine and perfect the devices and its applications. Now here he was doing the most private and delicate part of his business, psychotherapy with a disturbed patient, so the Government had to send a lawyer barging in not understanding half what went on and misunderstanding the rest.

The lawyer arrived at 3:45, and Haber came striding into the outer office to greet him—her, it turned out—and to get a friendly warm impression established right away. It went better if they saw you were unafraid, cooperative, and personally cordial. A lot of doctors let their resentment show, when they had an HEW inspector; and those doctors did not get many Government grants.

It was not altogether easy to be cordial and warm with this lawyer. She snapped and clicked. Heavy brass snap-catch on handbag, heavy copper and brass jewelry that clattered, clump-heel shoes, a huge silver ring with a horribly ugly African mask design, frowning eyebrows, hard voice: clack, clash, snap . . . In the second ten seconds, Haber suspected that the whole affair was indeed a mask, as the ring said: a lot of sound and fury signifying timidity. That, however, was none of his business. He would never know the woman behind the mask, and she did not matter, so long as he could make the right impression on Miss Lelache the Lawyer.

If it didn't go cordially, at least it didn't go badly; she was competent, had done this kind of thing before and had done her homework for this particular job. She knew what to ask and how to listen.

"This patient, George Orr," she said, "he's not an addict, correct? Is he diagnosed as psychotic or disturbed, after three weeks' therapy?"

"Disturbed, as the Health Office defines those words. Deeply disturbed and with artificial reality-orientations, but improving under current therapy."

She had a pocket recorder and was taking all this down: every five seconds, as the law required, the thing went *teep*.

"Will you describe the therapy you're employing please *teep* and explain the role this device plays in it? Don't tell me how it *teep* works, that's in your report, but what it does. *Teep* for instance, how does its use differ from the Elektroson or the trancap?"

"Well, those devices, as you know, generate various low-frequency pulses which stimulate nerve-cells in the cerebral cortex. Those signals are what you might call generalised; their effect on the brain is obtained in a manner basically similar to that of strobe-lights at a critical rhythm, or an aural stimulus like a drumbeat. The Augmentor delivers a specific signal which can be picked up by a specific area. For instance, a subject can be trained to produce alpha-rhythm at will, as you know; but the Augmentor can induce it without any training, and even when he's in a condition not normally conducive to the alpha-rhythm. It feeds a 9-cycle alpha

rhythm through appropriately placed electrodes, and within seconds the brain can accept that rhythm and begin producing alpha-waves as steadily as a Zen Buddhist in trance. Similarly, and more usefully, any stage of sleep can be induced, with its typical cycles and regional activities."

"Will it stimulate the pleasure center, or the speech center?"

Oh, the moralistic gleam in an ACLU eye, whenever that pleasure center bit came up! Haber concealed all irony and irritation, and answered with friendly sincerity. "No. It's not like ESB, you see. It's not like electrical stimulation, or chemical stimulation, of any center; it involves no intrusion on special areas of the brain. It simply induces the entire brain-activity to change, to shift into another of its own, natural states. It's a bit like a catchy tune, that sets your feet tapping. So the brain enters and maintains the condition desired for study or therapy, as long as need be. I called it the Augmentor to point up its non-creative function. Nothing is imposed from outside. Sleep induced by the Augmentor is precisely, literally, the kind and quality of sleep normal to that particular brain. The difference between it and the electrosleep machines is like a personal tailor compared to mass-produced suits. The difference between it and electrode implantation is—oh, hell—a scalpel to a sledgehammer!"

"But how do you make up the stimuli you use? Do you *teep* record an alpha-rhythm, for instance, from one subject to use on another *teep*?"

He had been evading this point. He did not intend to lie, of course, but there was simply no use talking about uncompleted research till it was done and tested; it might give a quite wrong impression to a non-specialist. He launched into an answer easily, glad to hear his own voice instead of her snapping and bangle-clattering and teeping; it was curious how he only heard the annoying little sound when she was talking. "At first I used a generalised set of stimuli, averaged out from records of many subjects. The depressive patient mentioned in the report was treated successfully thus. But I felt the effects were more random and erratic than I liked. I began to experiment. On animals, of course. Cats. We sleep-researchers like cats, you know; they sleep a lot! Well, with animal subjects I found that the most promising line was to use rhythms previously recorded from the subject's own brain. A kind of auto-stimulation via recordings. Specificity is what I'm after, you see. A brain will respond to its own alpha rhythm at once, and spontaneously. Now of course there are therapeutic vistas opened up, along the other line of research. It might be possible to impose a slightly different pattern gradually upon the patient's own: a healthier or more complete pattern. One recorded previously from that subject, possibly, or from a different subject. This could prove tremendously helpful in cases of brain-damage, lesion, trauma; it might aid a damaged brain to re-establish its old habits in new channels—something which the brain struggles long and hard to do by itself. It might be used to 'teach' an abnormally functioning

brain new habits, and so forth. However, that's all speculative, at this point, and if and when I return to research on that line I will of course re-register with HEW." That was quite true. There was no need to mention that he was doing research along that line, since so far it was quite inconclusive and would merely be misunderstood. "The form of auto-stimulation by recording that I'm using in this therapy may be described as having no effect on the patient beyond that exerted during the period of the machine's functioning: five to ten minutes." He knew more of any HEW lawyer's specialty than she knew of his; he saw her nodding slightly at that last sentence, it was right down her alley.

But then she said, "What *does* it do, then?"

"Yes, I was coming to that," Haber said, and quickly readjusted his tone, since the irritation was showing through. "What we have in this case is a subject who is afraid to dream: an oneirophobe. My treatment is basically a simple conditioning-treatment in the classic tradition of modern psychology. The patient is induced to dream here, under controlled conditions; dream-content and emotional affect are manipulated by hypnotic suggestion. The subject is being taught that he can dream safely, pleasantly, et. cetera, a positive conditioning which will leave him free of his phobia. The Augmentor is an ideal instrument for this purpose. It ensures that he will dream, by instigating and then reinforcing his own typical d-state activity. It might take a subject up to an hour and a half to go through the various stages of s-sleep and reach the d-state on his own, an impractical length for daytime therapy-sessions, and moreover during deep sleep the force of hypnotic suggestions concerning dream-content might be partly lost. This is undesirable; while he's in conditioning, it's essential that he have no bad dreams, no nightmares. Therefore the Augmentor provides me with both a time-saving device and a safety factor. The therapy could be achieved without it; but it would probably take months; with it, I expect to take a few weeks. It may prove to be as great a time-saver, in appropriate cases, as hypnosis itself has proved to be in psychoanalysis and in conditioning therapy."

Teep, said the lawyer's recorder, and *Bong* said his own desk-communicator in a soft, rich, authoritative voice. Thank God. "Here's our patient now. Now I suggest, Miss Lelache, that you meet him, and we may chat a bit if you like; then perhaps you can fade off to that leather chair in the corner, right? Your presence shouldn't make any real difference to the patient, but if he's constantly reminded of it it could slow things down badly. He's a person in a fairly severe anxiety state, you see, with a tendency to interpret events as personally threatening, and a set of protective delusions built up—as you'll see. Oh yes, and the recorder off, that's right, a therapy session's not for the record. Right? Okay, good. Yes, hello, George, come on in! This is Miss Lelache, the participant from HEW. She's here to see the Augmentor in use." The two were shaking hands in the most ridiculously stiff way. Crash

clank! went the lawyer's bracelets. The contrast amused Haber: the harsh fierce woman, the meek characterless man. They had nothing in common at all.

"Now," he said, enjoying running the show, "I suggest that we get on with business, unless there's anything special on your mind, George, that you want to talk about first?" He was, by his own apparently unassertive movements, sorting them out: the Lelache to the chair in the far corner, Orr to the couch. "Okay, then, good. Let's run off a dream. Which will incidentally constitute a record for HEW of the fact that the Augmentor doesn't loosen your toenails, nor harden your arteries, nor blow your mind, nor indeed have any side effects whatsoever except perhaps a slight compensatory decrease in dreaming sleep tonight." As he finished the sentence he reached out and placed his right hand on Orr's throat, almost casually.

Orr flinched from the contact as if he had never been hypnotised.

Then he apologised. "Sorry. You come at me so suddenly."

It was necessary to rehypnotise him completely, employing the c-v induction method, which was perfectly legal of course but rather more dramatic than Haber liked to use in front of an observer from HEW; he was furious with Orr, in whom he had sensed growing resistance for the last five or six sessions. Once he had the man under, he put on a tape he had made himself, of all the boring repetition of deepening trance and posthypnotic suggestion for rehypnotising: "You are comfortable and relaxed now. You are sinking deeper into trance," and so on and so on. While it played he went back to his desk and sorted through papers with a calm, serious face, ignoring the Lelache. She kept still, knowing the hypnotic routine must not be interrupted; she was looking out the window at the view, the towers of the city.

At last Haber stopped the tape and put the trancap on Orr's head. "Now, while I'm hooking you up let's talk about what kind of dream you're going to dream, George. You feel like talking about that, don't you?"

Slow nod from the patient.

"Last time you were here we were talking about some things that worry you. You said you like your work, but you don't like riding the subway to work. You keep feeling crowded in on, you said—squeezed, pressed together. You feel as if you had no elbow room, as if you weren't free."

He paused, and the patient, who was always taciturn in hypnosis, at last responded merely: "Overpopulation."

"Mhm, that was the word you used. That's your word, your metaphor, for this feeling of unfreedom. Well, now, let's discuss that word. You know that back in the 18th century Malthus was pressing the panic button about population growth; and there was another fit of panic about it thirty, forty years ago. And sure enough population has gone up; but all the horrors they predicted just haven't come to pass. It's just not as bad as they said it would be. We all get by just fine here in America, and if our living

standard has had to lower in some ways it's even higher in others than it was a generation ago. Now perhaps an excessive dread of overpopulation — overcrowding — reflects not an outward reality, but an inward state of mind. If you feel overcrowded when you're not, what does that mean? Maybe that you're afraid of human contact—of being close to people, of being touched. So you've found a kind of excuse for keeping reality at a distance." The EEG was running, and as he talked he made the connections to the Augmentor. "Now, George, we'll be talking a little longer and then when I say the keyword Antwerp you'll drop off to sleep; when you wake up you'll feel refreshed and alert. You won't recall what I'm saying now, but you will recall your dream. It'll be a vivid dream, vivid and pleasant, an effective dream. You'll dream about this thing that worries you, overpopulation: you'll have a dream where you find out that it isn't really that that worries you. People can't live alone, after all; to be put in solitary is the worst kind of confinement! We *need* people around us. To help us, to give help to, to compete with, to sharpen our wits against." And so on and so on. The lawyer's presence cramped his style badly; he had to put it all in abstract terms, instead of just telling Orr what to dream. Of course, he wasn't falsifying his method in order to deceive the observer; his method simply wasn't yet invariable. He varied it from session to session, seeking for the sure way to suggest the precise dream he wanted, and always coming up against the resistance that seemed to him sometimes to be the over-literalness of primary-process thinking, and sometimes to be a positive balkiness in Orr's mind. Whatever prevented it, the dream almost never came out the way Haber had intended; and this vague, abstract kind of suggestion might work as well as any. Perhaps it would rouse less unconscious resistance in Orr.

He gestured to the lawyer to come over and watch the EEG screen, at which she had been peering from her corner, and went on: "You're going to have a dream in which you feel uncrowded, unsqueezed. You'll dream about all the elbow room there is in the world, all the freedom you have to move around." And at last he said, "Antwerp!"—and pointed to the EEG traces so that the Lelache would see the almost instantaneous change. "Watch the slowing-down all across the graph," he murmured. "There's a high-voltage peak, see, there's another . . . Sleep-spindles. He's already going into the second stage of orthodox sleep, s-sleep, whichever term you've run into, the kind of sleep without vivid dreams that occurs in between the d-states all night. But I'm not letting him go on down into sleep fourth-stage, since he's here to dream. I'm turning on the Augmentor. Keep your eye on those traces. Do you see?"

"Looks like he was waking up again," she murmured doubtfully.

"Right! But it's not waking. Look at him."

Orr lay supine, his head fallen back a little so that his short, fair beard jutted up; he was sound asleep, but there was a tension about his mouth; he sighed

deeply.

"See his eyes move, under the lids? That's how they first caught this whole phenomenon of dreaming-sleep, back in the 1930's; they called it rapid-eye-movement sleep, REM, for years. It's a hell of a lot more than that, though. It's a third state of being. His whole autonomic system is as fully mobilised as it might be in an exciting moment of waking life; but his muscle-tone is nil, the large muscles are relaxed more deeply than in s-sleep. Cortical, subcortical, hippocampal, and midbrain areas all as active as in waking, whereas they're inactive in s-sleep. His respiration and blood pressure are up to waking levels or higher. Here, feel the pulse." He put her fingers against Orr's lax wrist. "80 or 85, he's going. He's having a humdinger, whatever it is . . ."

"You mean he's dreaming?" She looked awed.

"Right."

"Are all these reactions normal?"

"Absolutely. We all go through this performance every night, four or five times, for at least ten minutes at a time. This is a quite normal d-state EEG on the screen. The only anomaly or peculiarity about it that you might be able to catch is an occasional high peaking right through the traces, a kind of brainstorm effect I've never seen in a d-state EEG before. Its pattern seems to resemble an effect that's been observed in electroencephalograms of men hard at work of a certain sort: creative or artistic work, painting, writing verse, even reading Shakespeare. What this brain is doing at those moments, I don't yet know. But the Augmentor gives me the opportunity to observe them systematically, and so eventually to analyse them out."

"There's no chance that the machine is causing this effect?"

"No." As a matter of fact, he had tried stimulating Orr's brain with a playback of one of these peak-traces, but the dream resulting from that experiment had been incoherent, a mishmash of the previous dream during which the Augmentor had recorded the peak, and the present one. No need to mention inconclusive experiments. "Now that he's well into this dream, in fact, I'll cut the Augmentor out. Watch, see if you can tell when I cut off the input." She couldn't. "He may produce a brainstorm for us anyhow; keep an eye on those traces. You may catch it first in the theta rhythm, there, from the hippocampus. It occurs in other brains, undoubtedly. Nothing's new. If I can find out *what* other brains, in what state, I may be able to specify much more exactly what this subject's trouble is; there may be a psychological or neurophysiological type to which he belongs. You see the research possibilities of the Augmentor? No effect on the patient except that of temporarily putting his brain into whichever of its own, normal states the physician wants to observe. —Look there!" She missed the peak, of course; EEG-reading on a moving screen took practice. "Blew his fuse. Still in the dream now . . . He'll tell us about it presently." He could not go on talking. His mouth had gone dry. He felt it: the shift, the arrival, the change.

The woman felt it too. She looked frightened. Holding the heavy brass necklace up close to her throat like a talisman, she was staring in dismay, shock, terror, out the window at the view.

He had not expected that. He had thought that only he could be aware of the change.

But she had heard him tell Orr what to dream; she had stood beside the dreamer; she was there at the center, like him. And like him had turned to look out the window at the vanishing towers fade like a dream, leave not a wrack behind, the insubstantial miles of suburb dissolving like smoke on the wind, the city of Portland, which had had a population of a million people before the Plague Years but had only about a hundred thousand these days of the Recovery, a mess and jumble like all American cities but unified by its hills and its misty, seven-bridged river, the old forty-storey First National Bank building dominating the downtown skyline, and far beyond, above it all, the serene and pale mountains . . .

She saw it happen. And he realised that he had never once thought that the HEW observer might see it happen. It hadn't been a possibility, he hadn't given it a thought. And this implied that he himself had not believed in the change, in what Orr's dreams did. Though he had felt it, seen it, with bewilderment, fear, and exultation, a dozen times now; though he had watched the horse become a mountain (if you can watch the overlap of one reality with another)—though he had been testing, and using, the effective power of Orr's dreams for nearly a month now, yet he had not believed in what was happening.

This whole day, from his arrival at work on, he had not given one thought to the fact that, a week ago, he had not been the Director of the Oregon Oneirological Institute, because there had been no Institute. Ever since last Friday, there had been an Institute for the last eighteen months. And he had been its founder and director. And this being the way it was—for him, for everyone on the staff, and his colleagues at the Medical School, and the government that funded it—he had accepted it totally, just as they did, as the only reality. He had suppressed his memory of the fact that, until last Friday, this had *not* been the way it was.

That had been Orr's most successful dream by far. It had begun in the old office across the river, under that damned mural photograph of Mount Hood, and had ended in this office . . . and he had been there, had seen the walls change around him, had known the world was being remade: and had forgotten it. He had forgotten it so completely that he had never even wondered if a stranger, a third person, might have the same experience.

What would it do to the woman? Would she understand, would she go mad, what would she do? Would she keep both memories, as he did, the true one and the new one, the old one and the true one?

She must not. She would interfere, bring in other observers, spoil the experiment completely, wreck his plans.

He would stop her at any cost. He turned to her, ready for violence, his hands clenched.

She was just standing there. Her brown skin had gone livid, her mouth was open. She was dazed. She could not believe what she had seen out that window. She could not and did not.

Haber's extreme physical tension relaxed a little. He was fairly sure, looking at her, that she was so confused and traumatised as to be harmless. But he must move quickly, all the same.

"He'll sleep for a while now," he said; his voice sounded almost normal, though hoarsened by the tightness of his throat muscles. He had no idea what he was going to say, but plunged ahead; anything to break the spell. "I'll let him have a short s-sleep period now. Not too long, or his dream-recall will be poor. It's a nice view, isn't it? These easterly winds we've been having, they're a godsend. In fall and winter I don't see the mountains for months at a go. But when the clouds clear off, there they are. It's a great place, Oregon. Most unspoiled state in the Union. Wasn't exploited much before the Crash. Portland was just beginning to get big, in the late seventies. Are you a native Oregonian?"

After a minute she nodded groggily. The matter-of-fact tone of his voice, if nothing else, was getting through to her.

"I'm from New Jersey originally. It was terrible there when I was a kid, the environmental deterioration. The amount of tearing down and cleaning up the East Coast had to do after the Crash, and is still doing, is unbelievable. Out here, the real damage of overpopulation and environmental mismanagement hadn't yet been done, except in California. The Oregon ecosystem was still intact." It was dangerous, this talking right on the critical subject, but he could not think of anything else: he was as if compelled. His head was too full, holding the two sets of memories, two full systems of information: one of the real (no longer) world with a human population of nearly seven billion and increasing geometrically, and one of the real (now) world with a population of less than one billion and still not stabilised.

My God, he thought, what has Orr done?

Six billion people.

Where are they?

But the lawyer must not realise. Must not. "Ever been East, Miss Lelache?"

She looked at him vaguely and said, "No."

"Well, why bother. New York's doomed in any case, and Boston; and anyhow the future of this country is out here. This is the growing edge. This is where it's at, as they used to say when I was a kid! I wonder, by the way, if you know Dewey Furth, at the HEW office here."

"Yes," she said, still punchdrunk, but beginning to respond, to act as if nothing had happened. A spasm of relief went through Haber's body. He wanted to sit down suddenly, to breathe hard. The danger was past. She was rejecting the incredible experience. She was asking herself now, what's wrong with me? Why on earth did I look out the window

expecting to see a city of three million? Am I having some sort of crazy spell?

Of course, Haber thought, a man who saw a miracle would reject his eyes' witness, if those with him saw nothing.

"It's stuffy in here," he said with a touch of solicitude in his voice, and went to the thermostat on the wall. "I keep it warm; old sleep-researcher's habit; body temperature falls during sleep, and you don't want a lot of subjects or patients with nose-colds. But this electric heat's too efficient, it gets too warm, makes me feel groggy . . . He should be waking soon." But he did not want Orr to recall his dream clearly, to recount it, to confirm the miracle. "I think I'll let him go a bit longer, I don't care about the recall on this dream, and he's right down in third-stage sleep now. Let him stay there while we finish talking. Was there anything else you wanted to ask about?"

"No. No, I don't think so." Her bangles clashed uncertainly. She blinked, trying to pull herself together. "If you'll send in the full description of your machine there, and its operation, and the current uses you're putting it to, and the results, all that, you know, to Mr. Furth's office, that should be the end of it . . . Have you taken out a patent on the device?"

"Applied for one."

She nodded. "Might be worthwhile." She had wandered, clashing and clattering faintly, over towards the sleeping man, and now stood looking at him with an odd expression on her thin, brown face.

"You have a queer profession," she said abruptly. "Dreams; watching people's brains work; telling them what to dream . . . I suppose you do a lot of your research at night?"

"Used to. The Augmentor may save us some of that; we'll be able to get sleep whenever we want, of the kind we want to study, using it. But a few years ago there was a period when I never went to bed before 6 a.m. for thirteen months." He laughed. "I boast about that now. My record. These days I let my staff carry most of the graveyard-shift load. Compensations of middle age!"

"Sleeping people are so remote," she said, still looking at Orr. "Where are they . . .?"

"Right here," Haber said, and tapped the EEG screen. "Right here, but out of communication. That's what strikes humans as uncanny about sleep. Its utter privacy. The sleeper turns his back on everyone. 'The mystery of the individual is strongest in sleep,' a writer in my field said. But of course a mystery is merely a problem we haven't solved yet! . . . He's due to wake now. George . . . George . . . Wake up, George."

And he woke as he generally did, fast, shifting from one state to the other without groans, stares, and relapses. He sat up and looked first at Miss Lelache, then at Haber, who had just removed the trancap from his head. He got up, stretching a little, and went over to the window. He stood looking out.

There was a singular poise, almost a monumentality, in the stance of his slight figure: he was completely still,

still as the center of something. Caught, neither Haber nor the woman spoke.

Orr turned around and looked at Haber.

"Where are they?" he said. "Where did they all go?"

Haber saw the woman's eyes open wide, saw the tension rise in her, and knew his peril. Talk, he must talk! "I'd judge from the EEG," he said, and heard his voice come out deep and warm, just as he wanted it, "that you had a highly charged dream just now, George. It was disagreeable; it was in fact very nearly a nightmare. The first 'bad' dream you've had here. Right?"

"I dreamed about the Plague," Orr said; and he shivered from head to foot, as if he were going to be sick.

Haber nodded. He sat down behind his desk. With his peculiar docility, his way of doing the habitual and acceptable thing, Orr came and sat down opposite in the big leather chair placed for interviewees and patients.

"You had a real hump to get over, and the getting over it wasn't easy. Right? This was the first time, George, that I've had you handle a real anxiety in a dream. This time, under my direction as suggested to you in hypnosis, you approached one of the deeper elements in your psychic malaise. The approach was not easy, or pleasant. In fact, that dream was a heller, wasn't it?"

"Do you remember the Plague Years?" Orr inquired, not aggressively, but with a tinge of something unusual in his voice: sarcasm? And he looked round at the Lelache, who had retired to her chair in the corner.

"Yes, I do. I was already a grown man when the first epidemic struck. I was twenty-two when that first announcement was made in Russia, that chemical pollutants in the atmosphere were combining to form virulent carcinogens. The next night they released the hospital statistics from Mexico City. Then they figured out the incubation period; and everybody began counting. Waiting. And there were the riots, and the fuck-ins, and the Doomsday Band, and the Vigilantes. And my parents died that year. My wife the next year. My two sisters and their children after that. Everyone I knew." Haber spread out his hands. "Yes, I remember those years," he said heavily. "When I must."

"They took care of the overpopulation problem, didn't they?" said Orr, and this time the edge was clear. "We really did it."

"Yes. They did. There is no overpopulation now. Was there any other solution, besides nuclear war? There is now no perpetual famine in South America, Africa, or Asia. When transport channels are fully restored, there won't be even the pockets of hunger that are still left. They say a third of humanity still goes to bed hungry at night; but in 1980 it was 92 per cent. There are no floods now in the Ganges caused by the piling up of corpses of people dead of starvation. There's no protein-deprivation and rickets among the working-class children of Portland, Oregon. As there was—before the Crash."

"The Plague," Orr said.

Haber leaned forward across the big

desk. "George. Tell me this. Is the world overpopulated?"

"No," the man said. Haber thought he was laughing, and drew back a little apprehensively; then he realised that it was tears that gave Orr's eyes that queer shine. He was near cracking. All the better. If he went to pieces, the lawyer would be still less inclined to believe anything he said that fitted with whatever she might recall.

"But half an hour ago, George, you were profoundly worried, anxious, because you believed that overpopulation was a present threat to civilisation, to the whole Terran ecosystem. Now I don't expect that anxiety to be gone, far from it. But I believe its quality has changed, since your living through it in the dream. You are aware, now, that it had no basis in reality. The anxiety still exists, but with this difference: you know now that it is irrational—that it conforms to an inward desire, rather than to outward reality. Now that's a beginning. A good beginning. A damn lot to have accomplished in one session, with one dream! Do you realise that? You've got a handle, now, to come at this whole thing with. You've got on top of something that's been on top of you, crushing you, making you feel pressed down and squeezed in. It's going to be a fairer fight from now on, because you're a freer man. Don't you feel that? Don't you feel, right now, already, just a little less crowded?"

Orr looked at him, then at the lawyer again. He said nothing.

There was a long pause.

"You look beat," Haber said, a verbal pat on the shoulder. He wanted to calm Orr down, to get him back into his normal self-effacing state, in which he would lack the courage to say anything about his dream-powers in front of the third person; or else to get him to break right down, to behave with obvious abnormality. But he wouldn't do either. "If there wasn't an HEW observer lurking in the corner, I'd offer you a shot of whiskey. But we'd better not turn a therapy session into a wingding, eh?"

"Don't you want to hear the dream?"

"If you want."

"I was burying them. In one of the big ditches . . . I did work in the Interment Corps, when I was sixteen, after my parents got it . . . Only in the dream the people were all naked and looked like they'd died of starvation. Hills of them. I had to bury them all. I kept looking for you, but you weren't there."

"No," Haber said reassuringly, "I haven't figured in your dreams yet, George."

"Oh, yes. With Kennedy. And as a horse."

"Yes; very early in the therapy," Haber said, dismissing it. "This dream then did use some actual recall material from your experience—"

"No. I never buried anybody. Nobody died of the Plague. There wasn't any Plague. It's all in my imagination. I dreamed it."

Damn the stupid little bastard! He had got out of control. Haber cocked his head and maintained a tolerant, non-interfering silence; it was all he could do, for a stronger move might make the lawyer suspicious.

"You said you remembered the Plague; but don't you also remember that there wasn't any Plague, that nobody died of pollutant cancer, that the population just kept on getting bigger and bigger? No? You don't remember that? What about you, Miss Lelache—do you remember it both ways—?" But at this Haber stood up: "Sorry, George, but I can't let Miss Lelache be drawn into this. She's not qualified. It would be improper for her to answer you. This is a psychiatric session. She's here to observe the Augmentor, and nothing further. I must insist on this."

Orr was quite white; the cheekbones stood out in his face. He sat staring up at Haber. He said nothing.

"We've got a problem here, and there's only one way to lick it, I'm afraid. Cut the Gordian knot. No offense, Miss Lelache, but as you can see, you're the problem. We're simply at a stage where our dialogue can't support a third member, even a non-participant. Best thing to do is just call it off. Right now. Start again tomorrow at four. O.K., George?"

Orr stood up, but didn't head for the door. "Did you ever happen to think, Dr. Haber," he said, quietly enough but stuttering a little, "that there, there might be other people who dream the way I do? That reality's being changed out from under us, replaced, renewed, all the time—only we don't know it? Only the dreamer knows it, and those who know his dream. If that's true, I guess we're lucky not knowing it. This is confusing enough."

Genial, noncommittal, reassuring, Haber talked him to the door, and out of it.

"You hit a crisis session," he said to the Lelache, shutting the door behind him. He wiped his forehead, let weariness and worry appear in his face and tone. "Whew! What a day to have an observer present!"

"It was extremely interesting," she said, and her bracelets chattered a little.

"He's not hopeless," Haber said. "A session like this one gives even me a pretty discouraging impression. But he has a chance, a real chance, of working out of this delusion-pattern he's caught in, this terrific dread of dreaming. The trouble is, it's a complex pattern, and a not unintelligent mind caught in it; he's all too quick at weaving new nets to trap himself in . . . If only he'd been sent for therapy ten years ago, when he was in his teens; but of course the Recovery had barely got underway ten years ago. Or even a year ago, before he started deteriorating his whole reality-orientation with drugs. But he tries, and keeps trying; and he may yet win through to a sound reality-adjustment."

"But he's not psychotic, you said," the Lelache remarked, a little dubiously.

"Correct. I said, disturbed. If he cracks, of course, he'll crack completely; probably in the catatonic schizophrenic line. A disturbed person isn't *less* liable to psychosis than a normal one." He could not talk any more, the words were drying up on his tongue, turning to dry shreds of nonsense. It seemed to him that he had been spewing out a deluge of meaningless speech for hours and now

he had no more control over it at all. Fortunately Miss Lelache had had enough too, evidently; she clashed, snapped, shook hands, left.

Haber went first to the tape recorder concealed in a wall panel near the couch, on which he recorded all therapy sessions: non-signalling recorders were a special privilege of psychotherapists and the Office of Intelligence. He erased the record of the past hour.

He sat down in his chair behind the big oak desk, opened the bottom drawer, removed glass and bottle, and poured a hefty slug of bourbon. My God, there hadn't been any bourbon half an hour ago—not for twenty years! Grain had been far too precious, with seven billion mouths to feed, to go for spirits. There had been nothing but pseudo-beer, or (for a doctor) absolute alcohol; that's what the bottle in his desk had been, half an hour ago.

He drank off half the shot in a gulp, then paused. He looked over at the window. After a while he got up and stood in front of the window looking out over the roofs and trees. One hundred thousand souls. Evening was beginning to dim the quiet river, but the mountains stood immense and clear, remote, in the level sunlight of the heights.

"To a better world!" Dr. Haber said, raising his glass to his creation, and finished his whisky in a lingering, savoring swallow.

Chapter 6.

It may remain for us to learn . . . that our task is only beginning, and that there will never be given to us even the ghost of any help, save the help of unutterable and unthinkable Time. We may have to learn that the infinite whirl of death and birth, out of which we cannot escape, is of our own creation, of our own seeking, —that the forces integrating worlds are the errors of the Past, —that the eternal sorrow is but the eternal hunger of insatiable desire; —and that the burnt-out suns are rekindled only by the inextinguishable passions of vanished lives.

—Lafcadio Hearn, Out of the East

GEORGE ORR'S apartment was on the top floor of an old frame house a few blocks up the hill on Corbett Avenue, a shabby part of town where most of the houses were getting on for a century, or well beyond it. He had three large rooms, a bathroom with a deep clawfoot tub, and a view between roofs to the river, up and down which passed ships, pleasure-boats, logs, gulls, great turning flights of pigeons.

He perfectly remembered his other flat, of course, the one-room 8½x11 with the pullout stove and balloon bed and coop bathroom down the linoleum hall, on the eighteenth floor of the Corbett Condominium tower, which had never been built.

He got off the trolley at Whiteaker Street and walked up the hill, and up the broad, dark stairs; he let himself in, dropped his briefcase on the floor and his body on the bed, and let go. He was terrified, anguished, exhausted, bewildered. "I've got to do something, I've got to *do* something," he kept

telling himself frantically, but he did not know what to do. He had never known what to do. He had always done what seemed to want doing, the next thing to be done, without asking questions, without forcing himself, without worrying about it. But that sureness of foot had deserted him when he began taking drugs, and by now he was quite astray. He must act, he had to *act*. He must refuse to let Haber use him any longer as a tool. He must take his destiny in his own hands.

He spread out his hands and looked at them, then sank his face into them; it was wet with tears. Oh hell, hell, he thought bitterly, what kind of man am I? Tears in my beard? No wonder Haber uses me. How could he help it? I haven't any strength, I haven't any character, I'm a born tool. I haven't any destiny. All I have is dreams. And now other people run them.

I must get away from Haber, he thought, trying to be firm and decisive, but even as he thought it he knew he wouldn't. Haber had him hooked, and with more than one hook.

A dream-configuration so unusual, indeed unique, Haber had said, was invaluable to research: Orr's contribution to human knowledge was going to prove immense. Orr believed that Haber meant this and knew what he was talking about. The scientific aspect of it all was in fact the only hopeful one, to his mind; it seemed to him that perhaps science might wring some good out of his peculiar and terrible gift, put it to some good ends, compensating a little for the enormous harm it had done.

The murder of six billion non-existent people.

Orr's head ached fit to split. He ran cold water in the deep, cracked washbasin, and dunked his whole face in for half a minute at a time, coming up red, blind, and wet as a newborn baby.

Haber had a moral line on him, then, but where he really had him caught was on the legal hook. If Orr quit Voluntary Therapy, he became liable to prosecution for obtaining drugs illegally, and would be sent to jail or the nut-hatch. No way out there. And if he didn't quit, but merely cut sessions and failed to cooperate, Haber had an effective instrument of coercion: the dream-suppressing drugs, which Orr could obtain only on his prescription. He was more uneasy than ever at the idea of dreaming spontaneously, without control, now. In the state he was in, and having been conditioned to dream effectively every time in the laboratory, he did not like to think what might happen if he dreamed without the rational restraints imposed by hypnosis. It would be effective, and a nightmare, a worse nightmare than the one he had just had in Haber's office; of that he was sure, and he dared not let it happen. He must take the dream-suppressants. That was the one thing he knew he must do, the thing that must be done. But he could do it only so long as Haber let him, and therefore he must cooperate with Haber. He was caught. Rat in a trap. Running a maze for the mad scientist, and no way out. No way, no way.

But he's not a mad scientist, Orr thought dully, he's a pretty sane one,

or he was. It's the chance of power that my dreams give him that twists him around. He keeps acting a part; and this gives him such an awfully big part to play. So that now he's using even his science as a means not an end . . . But his ends are good, aren't they? He wants to improve life for humanity. Is that wrong?

His head was aching again. He was underwater when the telephone rang. He hastily tried to rub his face and hair dry, and returned to the dark bedroom, groping. "Hello, Orr here."

"This is Heather Lelache," said a soft, suspicious alto.

An irrelevant and poignant sensation of pleasure rose in him, like a tree that grew up and flowered all in one moment with its roots in his loins and its flowers in his mind. "Hello," he said again.

"Do you want to meet me some time to talk about this?"

"Yes. Certainly."

"Well. I don't want you thinking that there's any case to be made using that machine thing, the Augmentor. That seems to be perfectly in line. It's had extensive laboratory trial, and he's had all the proper checks and gone through the proper channels, and now it's registered with HEW. He's a real pro, of course. I didn't realise who he was when you first talked to me. A man doesn't get to that sort of position unless he's awfully good."

"What position?"

"Well. The directorship of a government-sponsored research institute!"

He liked the way she began her fierce, scornful sentences so often with a weak, conciliatory "Well." She cut the ground out from under them before they ever got going, let them hang unsupported in the void. She had courage, great courage.

"Oh, yes, I see," he said vaguely. Dr. Haber had got his directorship the day after Orr had got his cabin. The cabin dream had been during the one all-night session they had had; they never tried another. Hypnotic suggestion of dream-content was insufficient to a night's dreaming, and at three a.m. Haber had at last given up and, hooking Orr to the Augmentor, had fed him deep-sleep patterns the rest of the night, so that they could both relax. But the next afternoon they had had a session, and the dream Orr had dreamed during it had been so long, so confused and complicated, that he had never been altogether sure of what he had changed, what good works Haber had been accomplishing that time. He had gone to sleep in the old office and had awakened in the O.O.I. office: Haber had got himself a promotion. But there had been more to it than that—the weather was a little less rainy, it seemed, since that dream; perhaps other things had changed. He was not sure. He had protested against doing so much effective dreaming in so short a time, and Haber had at once agreed not to push him so fast, and had let him go without a session for five days. Haber was, after all, a benevolent man. And besides he didn't want to kill the goose that laid the golden eggs.

The goose. Precisely. That describes me perfectly, Orr thought. A damned white vapid stupid goose. He had lost a bit of what Miss Lelache was saying.

"I'm sorry," he said, "I missed something. I'm kind of thick-headed just now, I think."

"Are you all right?"

"Yes, fine. Just sort of tired."

"You had an upsetting dream, about the Plague, didn't you. You looked awful after it. Do these sessions leave you this way every time?"

"No, not always. This was a bad one. I guess you could see that. Were you arranging for us to meet?"

"Yes. Monday for lunch, I said. You work downtown, don't you, at Bradford Industries?"

To his mild wonder he realised that he did. The great water-projects of Bonneville-Umatilla did not exist, to bring water to the giant cities of John Day and French Glen, which did not exist. There were no big cities in Oregon, except Portland. He was not a draftsman for the District, but for a private tools firm downtown; he worked in the Stark Street office. Of course. "Yes," he said. "I'm off from one to two. We could meet at Dave's, on Ankeny."

"One to two is fine. So's Dave's. I'll see you there Monday."

"Wait," he said. "Listen. Will you—would you mind telling me what Dr. Haber said, I mean, what he told me to dream when I was hypnotised? You heard all that, didn't you?"

"Yes, but I couldn't do that, I'd be interfering in his treatment. If he wanted you to know he'd tell you. It would be unethical, I can't."

"I guess that's right."

"Yes. I'm sorry. Monday then?"

"Goodbye," he said, suddenly overwhelmed with depression and foreboding, and put the receiver back without hearing her say goodbye. She couldn't help him. She was courageous and strong, but not that strong. Perhaps she had seen or sensed the change, but she had put it away from her, refused it. Why not? It was a heavy load to bear, that double memory, and she had no reason to undertake it, no motive for believing even for a moment a driveling psycho who claimed that his dreams came true.

Tomorrow was Saturday. A long session with Haber, four o'clock until six or longer. No way out.

It was time to eat, but Orr wasn't hungry. He had not turned on the lights in his high, twilit bedroom, or in the living room which he had never got around to furnishing in the three years he'd lived here. He wandered in there now. The windows looked out on lights and the river, the air smelled of dust and early spring. There was a woodframe fireplace, an old upright piano with eight ivories missing, a pile of carpeting mill-ends by the hearth, and a decrepit Japanese bamboo table ten inches high. Darkness lay softly on the bare pine floor, unpolished, unswept.

George Orr lay down in that mild darkness, full length, face down, the smell of the dusty wooden floor in his nostrils, the hardness of it upholding his body. He lay still, not asleep; somewhere else than sleep, farther on, farther out, a place where there are no dreams. It was not the first time he had been there.

When he got up, it was to take a

chlorpromazine tablet and go to bed. Haber had tried him with phenothiazines this week; they seemed to work well, to let him enter the d-state at need but to weaken the intensity of the dreams so that they never rose to the effective level. That was fine, but Haber said that the effect would lessen, just as with all the other drugs, until there was no effect at all. Nothing will keep a man from dreaming, he had said, but death.

This night, at least, he slept deep, and if he dreamed the dreams were fleeting, without weight. He didn't wake until nearly noon on Saturday. He went to his refrigerator and looked in it; he stood contemplating it a while. There was more food in it than he had ever seen in a private refrigerator in his life. In his other life. The one lived among seven billion others, where the food, such as it was, was never enough. Where an egg was the luxury of the month—"today we ovulate!" his halfwife had used to say when she bought their egg ration . . . Curious, in this life they hadn't had a trialmarriage, he and Donna. There was no such thing, legally speaking, in the post-Plague years. There was full marriage only. In Utah, since the birthrate was still lower than the deathrate, they were even trying to re-institute polygamous marriage, for religious and patriotic reasons. But he and Donna hadn't had any kind of marriage this time, they had just lived together. But still it hadn't lasted. His attention returned to the food in the refrigerator.

He was not the thin, sharp-boned man he had been in the world of the seven billion; he was quite solid, in fact. But he ate a starving man's meal, an enormous meal—hardboiled eggs, buttered toast, anchovies, jerky, celery, cheese, walnuts, a piece of cold halibut spread with mayonnaise, lettuce, pickled beets, chocolate cookies—anything he found on his shelves. After this orgy he felt physically a great deal better. He thought of something, as he drank some genuine nonersatz coffee, that actually made him grin. He thought: In *that* life, yesterday, I dreamed an effective dream, which obliterated six billion lives and changed the entire history of humankind for the past quarter-century. But in *this* life, which I then created, I did *not* dream an effective dream. I was in Haber's office, all right, and I dreamed; but it didn't change anything. It's been this way all along, and I merely had a bad dream about the Plague Years. There's nothing wrong with me; I don't need therapy.

He had never looked at it this way before, and it amused him enough that he grinned; but not particularly happily.

He knew he would dream again.

It was already past two. He washed up, found his raincoat (real cotton, a luxury in the other life), and set off on foot to the Institute, a couple of miles' walk, up past the Medical School and then farther up, into Washington Park. He could have got there by the trolleys, of course, but they were sporadic and roundabout, and anyhow there was no rush. It was pleasant, passing through the warm March rain, the unbustling streets; the trees were leafing out, the

chestnuts ready to light their candles.

The Crash, the carcinomic plague which had reduced human population by five billion in five years, and another billion in the next ten, had shaken the civilisations of the world to their roots and yet left them, in the end, intact. It had not changed anything radically: only quantitatively.

The air was still profoundly and irremediably polluted: that pollution predated the Crash by decades, indeed was its direct cause. It didn't harm anybody much now, except the newborn. The Plague, in its leukemoid variety, still selectively, thoughtfully as it were, picked off one out of four babies born and killed it within six months. Those who survived were virtually cancer-resistant. But there are other griefs.

No factories spewed smoke, down by the river. No cars ran fouling the air with exhaust; what few there were, were steamers or battery-powered.

There were no birds any more, either.

The effects of the Plague were visible in everything, it was itself still endemic, and yet it hadn't prevented war from breaking out. In fact the fighting in the Near East was more savage than it had been in the more crowded world. The U.S. was heavily committed to the Israeli-Egyptian side in weapons, munitions, planes, and "military advisers" by the regiment. China was in equally deep on the Iraq-Iran side, though she hadn't yet sent in Chinese soldiers, only Tibetans, North Koreans, Vietnamese, and Mongolians. Russia and India were holding uneasily aloof; but now that Afghanistan and Brazil were going in with the Iranians, Pakistan might jump in on the Isragypt side. India would then panic and line up with China, which might scare the U.S.S.R. enough to push her in on the U.S. side. This gave a line-up of twelve Nuclear Powers in all, six to a side. So went the speculations. Meanwhile Jerusalem was rubble, and in Saudi Arabia and Iraq the civilian population was living in burrows in the ground while tanks and planes sprayed fire in the air and cholera in the water, and babies crawled out of the burrows blinded by napalm.

They were still massacring whites in Johannesburg, Orr noticed on a headline at a corner newspaper stand. Years now since the Uprising, and there were still whites to massacre in South Africa! People are tough . . .

The rain fell warm, polluted, gentle on his bare head as he climbed the grey hills of Portland.

In the office with the great corner window that looked out into the rain, he said, "Please, stop using my dreams to improve things, Dr. Haber. It won't work. It's wrong. I want to be *cured*."

"That's the one essential prerequisite to your cure, George! *Wanting* it."

"You're not answering me."

But the big man was like an onion, slip off layer after layer of personality, belief, response, infinite layers, no end to them, no center to him. Nowhere that he ever stopped, had to stop, had to say Here I stay! No being, only layers.

"You're using my effective dreams to change the world. You won't admit to me that you're doing it. Why not?"

"George, you must realise that you ask questions which from your point of view may seem reasonable, but which from my point of view are literally unanswerable. We don't see reality the same way."

"Near enough the same to be able to talk."

"Yes. Fortunately. But not always to be able to ask and answer. Not yet."

"I can answer your questions, and I do . . . But anyway: look. You can't go on changing things, trying to run things."

"You speak as if that were some kind of general moral imperative." He looked at Orr with his genial, reflective smile, stroking his beard. "But in fact, isn't that man's very purpose on earth—to do things, change things, run things, make a better world?"

"No!"

"What is his purpose, then?"

"I don't know. Things don't have purposes, as if the universe were a machine, where every part has a useful function. What's the function of a galaxy? I don't know if our life has a purpose and I don't see that it matters. What does matter is that we're a part. Like a thread in a cloth or a grassblade in a field. It *is* and we *are*. What we do is like wind blowing on the grass."

There was a slight pause, and when Haber answered his tone was no longer genial, reassuring, or encouraging. It was quite neutral and verged, just detectably, on contempt.

"You're of a peculiarly passive outlook for a man brought up in the Judaeo-Christian-Rationalist West. A sort of natural Buddhist. Have you ever studied the Eastern mysticisms, George?" The last question, with its obvious answer, was an open sneer.

"No. I don't know anything about them. I do know that it's wrong to force the pattern of things. It won't do. It's been our mistake for a hundred years. Don't you—don't you see what happened yesterday?"

The opaque, dark eyes met his, straight on.

"What happened yesterday, George?"

No way. No way out.

Haber was using sodium pentothal on him now, to lower his resistance to hypnotic procedures. He submitted to the shot, watching the needle slip with only a moment of pain into the vein of his arm. This was the way he had to go; he had no choice. He had never had any choice. He was only a dreamer.

Haber went off somewhere to run something, while the drug took effect; but he was back promptly in fifteen minutes, gusty, jovial, and indifferent. "All right! Let's get on with it, George!"

Orr knew, with dreary clarity, what he would get on with today: the war. The papers were full of it, even Orr's news-resistant mind had been full of it, coming here. The growing war in the Near East. Haber would end it. And no doubt the killings in Africa. For Haber was a benevolent man. He wanted to make the world better for humanity.

The end justifies the means. But what if there never is an end? All we have is means. Orr lay back on the couch, and shut his eyes. The hand touched his throat. "You will enter the hypnotic state now, George," said Haber's deep voice. "You are"

dark.

In the dark.

Not quite night yet: late twilight on the fields. Clumps of trees looked black and moist. The road he was walking on picked up the faint, last light from the sky; it ran long and straight, an old country highway, cracked blacktop. A goose was walking ahead of him, about fifteen feet in advance and visible only as a white, bobbing blur. Now and then it hissed a little.

The stars were coming out, white as daisies. A big one was blooming just to the right of the road, low over the dark country, tremulously white. When he looked up at it again it had already become larger and brighter. *It's enhuging*, he thought. It seemed to grow reddish as it brightened. It enreddenhuged. The eyes swam. Small bluegreen streaks zipped about it zigzagging Brownian roundianroundian. A vast and creamy halo pulsated about big star and tiny zips, fainter, clearer, pulsing. *Oh no no no!* he said as the big star brightened hugendly BURST blinding. He fell to the ground covering his head with his arms as the sky burst into streaks of bright death, but could not turn onto his face, must behold and witness. The ground swung up and down, great trembling wrinkles passing through the skin of Earth. "Let be, let be!" he screamed aloud with his face against the sky, and woke on the leather couch.

He sat up, and put his face in his sweaty, shaking hands.

Presently he felt Haber's hand heavy on his shoulder. "Bad time again? Damn. I thought I'd let you off easy. Told you to have a dream about peace."

"I did."

"But it was disturbing to you?"

"I was watching a battle in space."

"Watching it? From where?"

"Earth." He recounted the dream briefly, omitting the goose. "I don't know whether they got one of ours or we got one of theirs."

Haber laughed. "I wish we *could* see what goes on out there! We'd feel more involved. But of course those encounters take place at speeds and distances that human vision simply isn't equipped to keep up with. Your version's a lot more picturesque than the actuality, no doubt. Sounds like a good science-fiction movie from the '70's. Used to go to those when I was a kid . . . But why do you think you dreamed up a battle-scene when the suggestion was peace?"

"Just peace? Dream about peace—that's all you said?"

Haber did not answer at once. He occupied himself with the controls of the Augmentor.

"Okay," he said at last. "This once, experimentally, let's let you compare the suggestion with the dream. Perhaps we'll find out why it came out negative. I said—no, let's run the tape." He went over to a panel in the wall.

"You tape the whole session?"

"Sure. Standard psychiatric practice. Didn't you know?"

How could I know if it's hidden, makes no noise-signal, and you didn't tell me? Orr thought; but he said nothing. Maybe it was standard practice, maybe it was Haber's personal arrogance; but in either case

he couldn't do much about it.

"Here we are, it ought to be about here. The hypnotic state now, George. You are— Here, don't go under, George!" The tape hissed. Orr shook his head and blinked. The last fragments of sentences had been Haber's voice on the tape, of course; and he was still full of the hypnosis-inducing drug.

"I'll have to skip a bit. All right." Now it was his voice on the tape again, saying, "—peace. No more mass killing of humans by other humans. No fighting in Iran and Arabia and Israel. No more genocides in Africa. No stockpiles of nuclear and biological weapons, ready to use against other nations. No more research on ways and means of killing people. A world at peace with itself. Peace as a universal lifestyle on Earth. You will dream of that world at peace with itself. Now you're going to sleep. When I say—" He stopped the tape abruptly, lest he put Orr to sleep with the keyword.

Orr rubbed his forehead. "Well," he said, "I followed instructions."

"Hardly. To dream of a battle in cislunar space—" Haber stopped as abruptly as the tape.

"Cislunar," Orr said, feeling a little sorry for Haber. "We weren't using that word, when I went to sleep. How are things in Isragypt?"

The made-up word from the old reality had a curiously shocking effect, spoken in this reality: like surrealism, it seemed to make sense and didn't, or seemed not to make sense and did.

Haber walked up and down the long, handsome room. Once he passed his hand over his redbrown, curly beard. The gesture was a calculated one and familiar to Orr, but when he spoke Orr felt that he was seeking and choosing his words carefully, not trusting, for once, to his inexhaustible fund of improvisation. "It's curious that you used the Defense of Earth as a symbol or metaphor of peace, of the end of warfare. Yet it's not unfitting. Only very subtle. Endlessly. For in fact it *was* that threat, that immediate peril of invasion by non-communicating, reasonlessly hostile aliens, which forced us to stop fighting among ourselves, to turn our aggressive-defensive energies outward, to extend the territorial drive to include all humanity, to combine our weapons against a common foe. If the Aliens hadn't struck, who knows? We might, actually, still be fighting in the Near East."

"Out of the frying pan into the fire," Orr said. "Don't you see, Dr. Haber, that that's all you'll ever get from me? Look, it's not that I want to block you, to frustrate your plans. Ending the war was a good idea, I agree with it totally. I even voted Isolationist last election because Harris promised to pull us out of the Near East. But I guess I can't, or my subconscious can't even imagine a warless world. The best it can do is substitute one kind of war for another. You said, no killing of humans by other humans. So I dreamed up the Aliens. Your own ideas are sane and rational, but this is my unconscious you're trying to use, not my rational mind. Maybe rationally I could conceive of the human species not trying to kill each other off by nations; in fact rationally it's easier to conceive of than

the motives of war. But you're handling something outside reason. You're trying to reach progressive, humanitarian goals with a tool that isn't suited to the job. Who has humanitarian dreams?"

Haber said nothing, and showed no reaction, so Orr went on.

"Or maybe it's not just my unconscious, irrational mind, maybe it's my total self, my whole being, that just isn't right for the job. I'm too defeatist, or passive, as you said, maybe. I don't have enough desires. Maybe that has something to do with my having this, this capacity to dream effectively; but if it doesn't, there might be others who can do it, people with minds more like your own, that you could work with better. You could test for it; I can't be the only one; maybe I just happened to become aware of it. But I don't *want* to do it. I want to get off the hook. I can't take it. I mean, look: all right, the war's been over in the Near East for six years, fine, but now there are the Aliens, up on the Moon. What if they land? What kind of monsters have you dredged up out of my unconscious mind, in the name of peace? I don't even know!"

"Nobody knows what the Aliens look like, George," Haber said, in a reasonable, reassuring tone. "We all have our bad dreams about 'em, God knows! But as you said, it's been over six years now since their first landing on the Moon, and they still haven't made it to Earth. By now, our missile defense systems are completely efficient. There's no reason to think they'll break through now, if they haven't yet. The danger period was during those first few months, before the Defense was mobilised on an international cooperative basis."

Orr sat a while, shoulders slumped. He wanted to yell at Haber, "Liar! Why do you lie to me?" But the impulse was not a deep one. It led nowhere. For all he knew, Haber was incapable of sincerity because he was lying to himself. He might be compartmenting his mind into two hermetic halves, in one of which he knew that Orr's dreams changed reality, and employed them for that purpose; in the other of which he knew that he was using hypnotherapy and dream-abreaction to treat a schizoid patient who believed that his dreams changed reality.

That Haber could have thus got out of communication with himself was rather hard for Orr to conceive; his own mind was so resistant to such divisions that he was slow to recognise them in others. But he had learned that they existed. He had grown up in a country run by politicians who sent the pilots to man the bombers to kill the babies to make the world safe for children to grow up in.

But that was in the old world, now. Not in the brave new one.

"I am cracking," he said. "You must see that. You're a psychiatrist. Don't you see that I'm going to pieces? Aliens from outer space attacking Earth! Look: if you ask me to dream again, what will you get? Maybe a totally insane world, the product of an insane mind. Monsters, ghosts, witches, dragons, transformations—all the stuff we carry around in us, all the horrors of childhood, the night fears, the

nightmares. How can you keep all that from getting loose? I can't stop it. I'm not in control!"

"Don't worry about control! Freedom is what you're working towards," Haber said gustily. "Freedom! Your unconscious mind is not a sink of horror and depravity. That's a Victorian notion, and a terrifically destructive one. It crippled most of the best minds of the 19th century, and hamstrung psychology all through the first half of the 20th. Don't be afraid of your unconscious mind! It's not a black pit of nightmares. Nothing of the kind! It is the wellspring of health, imagination, creativity. What we call 'evil' is produced by civilisation, its constraints and repressions, deforming the spontaneous, free self-expression of the personality. The aim of psychotherapy is precisely this, to remove those groundless fears and nightmares, to bring up what's unconscious into the light of rational consciousness, examine it objectively, there is *nothing to fear.*"

"But there is," Orr said very softly.

Haber let him go at last. He came out into the spring twilight, and stood a minute on the steps of the Institute with his hands in his pockets, looking at the streetlights in the city below, so blurred by mist and dusk that they seemed to wink and move like the tiny, silvery shapes of tropical fish in a dark aquarium. A cable-car was clanking up the steep hill towards its turnaround here at the top of Washington Park, in front of the Institute. He went out into the street, and climbed aboard the car while it was turning. His walk was evasive and yet aimless. He moved like a sleepwalker, like one impelled.

—to be concluded—

—Ursula K. LeGuin

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Sol Cohen, Publisher

A GIRL LIKE YOU

TED WHITE

Illustrated by MIKE KALUTA

When Barry Goldwater visited South Africa, he praised Apartheid as a solution to that country's problems, and it is hard to escape the feeling that there are many in this country now who—goaded by ghetto uprisings, riots, and "long, hot summers—might wish for it here. The following story was written with the assumption that their wishes will come true . . .

MARI-ELLIN AGNEW tripped and fell, her hands plunging into the heavy wet grass, her ankle twisted and alive with pain.

Behind her, down the hill, the sounds of firing and the screams. Ahead, only the blackness of night and the thin curtain of misty rain.

She was shaking, her whole body caught in convulsive shudders, and she had to dig her fingers into the spongy turf and squeeze to stifle the scream of pain and fear and shock that demanded release from her throat.

The scream became a sob, and she swallowed it as she turned her head to stare back in the direction from which she'd fled.

The burning car was still a bright pyre on the edge of the road at the foot of the hill. She saw no pursuers silhouetted against the flames, and for that at least she could be grateful.

But suddenly the darkness beyond the car and off to the left was broken by a brief staccato of light, to which the rain-deadened sotto-voce chatter of an automatic gun was only an echo. They were not yet finished down there; someone must still be alive. Fear clenched at her abdomen again, and then Mari-Ellin was once more scrambling up the uneven ground of the hillside, her twisted ankle forgotten in her panic.

It had been madness to take a car out on the road at night, even a modern armored car; everyone had said that and she'd agreed. But David had been so certain of himself, so angry and so certain—

And now so dead.

Slipping and stumbling, she crested the hill and despite herself she stopped and looked back again. The light of the burning car was dimmer, a pale smudge in the wet night; the fire was at last burning itself out, leaving twisted pieces of glowing metal. There were no more shots. From somewhere beyond the wrecked and dying car came a needle beam of light, darting and probing. Another answered it.

The killing was done, then. Now they were searching for signs that might betray any who had escaped them. They were, knowingly or not, searching for her! It took no more to

galvanize her, to send her running down the hill away from them, the thick clumps of grass unseen beneath her feet, the wet grass whipsawing sharply at her legs, her breath ragged in her raw throat.

THEY'D MINED the road. There had been rumors of road-mines on the Interstates, but mostly in the East; not so close to Chicago. The blast had lifted the car from the road, thrown it around to the right, and then dropped it into a screaming sideways slide that ended in two complete rolls and a skid along the road's shoulder on the car's left side.

That alone would not have been enough. All six of the car's passengers were strapped in place in their bucket seats by the safety webbing. David Agnew had only to start the left jacks and the car would right itself and be ready to drive on, crippled only by a few scratches in its paint.

But the mine was only the beginning. Before the car had come to a complete rest, napalm exploded over its outer surface and an armor-piercing shell burst into the rear engine compartment. Even as the protective shutters closed over the insides of the heavy-plate windows, the main turbine seized with a banshee shriek, and was still.

The airconditioning system was still functioning, and the heat was not yet noticeable inside the car, but sweat had already begun to bead on Agnew's upper lip as he punched again at the jack control. The jacks were dead; they were on the hydraulic circuit. The panel lights cast a soft blue glow over David Agnew's face; their gauges told

the whole story. Mari-Ellin watched in dumb fascination while her husband tried to activate the emergency electrical power circuit. She was suspended directly over him, the right door above her. In the cracks of the window shutters she could see the razor-lines of white flame.

The shell had done the real damage. The batteries were still operating, but not only the turbine but the servo-pumps that manned the hydraulic system were gone. No electric motors would ever operate them again.

David was swearing: "They got us; they got us good—!"

Her mouth was dry and her lips stuck together. "David—? Can't you *do* something?"

"Mark? Fred?" David said, ignoring her. "You all right?"

"Yessir, Mistuh Agnew," came Fred's quiet voice.

"How're the girls?" They were in the seats furthest back, almost over the engine compartment.

"They're all right too," Mark said. "As all right as they're going to be."

"Okay. I'm going to give you guns."

"*David!*" Mari-Ellin felt the icicle-stab of fear.

"Got to, honey," he said in an undertone.

"What makes you think that, Mistuh Agnew?" asked Fred.

"It's for your own protection," David said. He was fishing in his pocket for the key that unlocked the guns compartment.

"*We* don't need guns," Mark said. His young voice was suddenly belligerent, the iron accent a new shock to Mari-Ellin.

David chuckled mordantly. "That's what *you* think."

"You give me a gun, you know where *I'll* put the first bullet," Mark insisted.

"You're being stupid, Mark," David said.

At the same moment, Fred was saying, "Hey, now, *Mark!*" He sounded shocked. "Don't you listen to him, Mistuh Agnew. His head is on wrong."

"Everyone in this car," David continued as if uninterrupted, "is going to be killed—slaughtered—unless he defends himself. You better forget that soul-brothers stuff, Mark. You're a tame nigger and if you don't know it, your cousins outside do."

One of Mari-Ellin's maids whimpered audibly from the back.

David Agnew had passed out the guns. Handguns to Mark and Fred, a handgun to Mari-Ellin, the riot-gun for himself. The two handguns, when he passed them back, were accepted without comment. Then he freed himself and his wife from the rigging, and undogged the roof-hatch.

"David—" She'd caught at his arm.

"I'm going out first. Then Fred. After him, you, Mari, and your maids. Mark last—you'll bring up the rear. Everyone got it?"

"David, I'm sorry I—"

His expression was impossible to read in the strange light, but she thought she saw loathing written across his face. "Cut across the road if you can," he said.

And that was the last time she saw him alive.

THEY WERE ALL dead now:

David, Fred, Mark, Sarah, and Alice. Everyone but her. She'd lost her gun in the wild scramble up the hill, but it hadn't mattered then. She'd never fired a gun in her life. Some of her friends in the Thursday Club practiced at the local firing range, she knew, but she had always scorned the idea. Guns were for men, not women. A woman had no need to defend herself with a gun; the idea was repugnant to her. She never touched guns, never handled them.

The night was black and confusing. She went downhill and up, stumbling over and around hillocks and hummocks, her sense of direction quite lost.

And then she climbed a hill and saw beyond a road, and on the road the banked coals of the wreck. Full circle: she was back where she had begun.

She waited and she watched for a long time. All was silence. No lights searched or beckoned. They were gone. Everyone was gone. She wondered how many hours she had been out there, in the wet of night, lost and stumbling on. She stared down at the soft glow of the destroyed car, her hair wet and tight against her head, her clothes soaked and binding, her skin cold and yet feverish. She stared, and then she went down.

Metal sighed and creaked and pinged and the heat of the wreck warmed her. She stood before it and held her hands out over it. The numbness of the cold began to leave her, and she felt strange stinging sensations on her arms and legs and face. She put her hand to her hair, and felt the singed areas where it had been burned away, and through her shock she realized that she had been burned in escaping through the roof hatch of the napalm-covered car. She hadn't noticed until now.

The rain came down in larger drops and hissed against the twisted metal. She turned away from the heat and saw just beyond her foot a hand. Its skin was dark, but whether the result of heat or of natural pigmentation she could not tell. It ended just beyond the wrist. A cramp seized her and she fell to the ground, vomitting.

When she looked up, something in the darkness beyond moved and caught her attention. She came to her feet and went closer.

A man was sitting on the low wall beyond the shoulder of the road. He was a black man, his clothes dark and difficult to distinguish, and he held a long gun in his hands. The gun was pointed at her. His eyes were intent upon her, but he said nothing and did not move. She had never seen him before.

"Are—are you going to shoot me?" she asked. The question surprised her even as she voiced it.

"Don't know," the man said. His voice was low and tired. "You tell me."

Her ankle hurt. It hurt in a way that demanded she sit and take her weight off it. She continued to stand. "I can't," she said. "You know that." Her voice matched his: flat and weary.

"The others," he said, "they all dead."

"I know. I guessed."

"One white; four of our people," he said.

"Well, you didn't have to kill them."

She thought she saw him give his head a slight shake. She remembered

what David had said: *tame niggers*, and she remembered that as she started to run across the road Mark had been firing at their attackers as if he'd quite forgotten his threats.

"What was he to you?" the man asked. "The white man."

"My husband."

"The others: your servants?"

"The two women, Sarah and Alice. Sarah was Alice's mother." She wondered if that meant anything to the man.

"You know who that girl's *father* was?"

"No. Of course not."

"Yeah," the man agreed, voice dead.

She remained standing, facing him, for what seemed like a long time. Her ankle throbbed its pain and from other places on her body other aches and burns also spoke. But she said nothing, waiting. She would not beg; not now. Her begging was done.

The man looked up, the whites of his eyes sudden pale gleams in the near-darkness. "You know who *your* father is."

"Yes," she agreed.

"Me too; I know who *my* father is," he said, and his meaning was plain to her.

It seemed to her that she had entered and was enduring a strange and terrible dream. The pain she felt was becoming less real, less important than the nameless judge she faced, and the dark eternity of the impossible gulf that separated them.

"Your husband was crazy," the man said.

"No," she said, correcting him. "Angry."

"Crazy," the man repeated.

"We—we'd had a fight," she said. "He was taking me to Gary."

"From Chicago? At night? In a *car*?"

"We'd had a fight," she repeated. "He was angry."

"What about?" the man asked.

"It doesn't matter now," she said. "He's dead. It's ended now."

"You tell me." The gun seemed to point more directly at her, and the feeling that she was in a dream faded a little. She became conscious again of the thin edge upon which her life balanced. Adrenalin sped her heart and brought fear a little closer.

"He—he found me with another man," she said.

The man with the gun grunted. "White—or black?"

"White, of course," she said. "I'm not a degenerate."

"Go on," the man said. "I got all night, white girl."

Why should I bother justifying myself—now? she asked herself, but the feeling that she was standing in judgement persisted. "I don't have to explain myself to you," she said.

"Sure you do," he said.

THE late-twentieth-century woman found herself living the Good Life in the modern white cities, but, as Mari-Ellin had discovered, the Good Life quite often led to boredom, a vague self-discontent, and a feeling that life held few remaining challenges. She had few tasks and no chores. The training and management of her servants was a woman's primary function, and this usually consisted of little more than teaching them their household duties and educating them

to their mistress' personal whims and foibles.

Where gaps exist, human ingenuity will fill them. Mari-Ellin's solution was to join the Thursday Club. Here, in the company of her peers, all middle-class women with equally empty lives, she discovered a new area of challenge, a new ladder to status.

It came out in the tittering gossip of Betty-Lou Martin, for whom vivacious social surroundings and a few white pills were the only prerequisites needed for a little oblique boasting.

"My dear Mari," she had said, taking Mari-Ellin's wrist to pull her closer. She giggled. "The most marvelous thing!"

It had taken little encouragement to discover that most marvelous thing: "Patti Gipson—you know her, don't you? So stiff, so proper—she's been having an affair with her doctor! Not her *medical* doctor, you understand: her *therapist!* You can *imagine* the sort of therapy he must be prescribing! But that's not what I wanted to tell you, darling. The most delicious thing is that her husband *knows!*"

"Does he really?" Mari-Ellin had replied politely. "What is he going to do?"

"Do?" Betty-Lou echoed. "Do? He's done it—he's *doing* it! The dear man has embarked upon a systematic plan of seduction! He's going to seduce every one of Patti's friends! Isn't that entirely too much?"

Not surprisingly, Mari-Ellin, after some thought, decided that it wasn't exactly *too much.* It had taken very little cerebration on her own part to deduce that Betty-Lou had been one of Fred Gipson's early conquests, and it came as no shock to her that she too was on the list, by the time she was approached.

Gradually she became aware that the Thursday Club was rife with the cross-currents of sexual intrigue and clandestine affairs. No one spoke directly of her own conquests, but it was permissible to hint broadly. Status was achieved by the accumulation of a respectable score, but over-zealousness had to be avoided. One young matron was quickly ostracized by the group after she successfully bedded seven husbands in as many nights. That was regarded as *promiscuity* and not at all the proper sort of thing.

Mari-Ellin never considered herself a sexual sophisticate; she was not at all jaded. She had not, for instance, ever desired or requested the presence or participation of any of her servants, male or female, in her bed—either with or without her current lover. In point of fact, she was regarded by those men who had sampled her to be somewhat unimaginative and unpassionate. She never made sounds while she was enjoying her lover, for instance, and on the one occasion when one gentleman raised the topic with her she declared the notion of mewling and "carrying on" to be "unladylike." Nonetheless, she was young, attractive, and tractable, and thus in continued demand.

That her own husband might himself be involved in this round of covert musical beds had occurred to her early in the game, but since one did not expect to be made privy to gossip about one's own husband, she had thought no more about it. It was the twentieth century, after all, and sauce

for the goose was sauce for the gander. She expected no less.

For that reason it was very upsetting—to say the least!—when David Agnew not only intruded upon one of her mid-afternoon bedroom scenes with Major Harrison, but actually created a Scene during which he slapped her own face and drew a copious quantity of blood from Major Harrison's nose.

It was not alone her surprise, but the white-faced ferocity of her husband which upset Mari-Ellin. David had called in his two personal blacks, Fred and Mark—in total, wanton disregard for the propriety of the situation, her own deshabille, and Major Harrison's similar state!—and ordered them to remove the Major and his clothes from the premises, immediately and without pause. The Major had been ejected onto the streets of sedate Oak Park in a state of total undress, and his clothes hurled after him!

Then, once alone with her, David Agnew had seized his wife and turned her over his knee, giving her a thrashing which not only reduced her to the emotional state of a frightened ten-year-old, (thus attuned to her sense of responsibility and worth, as David told her mercilessly), but also warmed her loins for her in a way she had previously never known.

Blinking away her tears, Mari-Ellin had tried to make this new fact known to her husband.

His slap across the left side of her face whipped her head around and sent her tumbling awkwardly to the floor, where she remained while he stalked to the door and slammed it shut behind him.

It was slowly borne inward over her bruised sensibilities that David did not, indeed, practice the sort of sexual laissez-faire to which she had become accustomed, and that he presently despised her.

The entire occasion was not, however, without other and more unpleasant repercussions. Major Harrison was a major in the Internal Security Police, Oak Park Division. His duties were usually slight, the only common threats to Internal Security in the posh Chicago suburb being an occasional runaway black from servitude. But he wielded not inconsiderable power, as head of the local branch of the nation's Strong Right Arm, and he was less than pleased with the treatment accorded him. The broken nose was just barely forgivable; his subsequent humiliation was not.

It came to pass, therefore, that early that evening David Agnew informed his wife in brutally chilly tones that he was taking her and four servants with him to Gary, Indiana, by car that night. He turned a deaf ear not only to her entreaties but also to those of his own blacks. He had received sufficient warning of Harrison's intended reprisals, and he preferred the devil he did not know to the one he did.

"A goddamned major in the ISP, for Christ's sake!" he'd told her. "Was he the best you could do?"

"You wouldn't understand," she had replied quite truthfully. Etti Harrison was the most recent member of the Thursday club, still quite wet behind her ears and dewy-eyed, and everyone had been vying for the first coup. It had been a moment of almost supernal

transcendence for her when she had succeeded in snaring Etti's husband first. In that moment she knew she enjoyed the highest rank of status in the Club. He had been, after all, simply The Major; she'd never given any thought to the service to which he was attached, nor did she know much about the ISP. It all had to do with those Blacks, and the Problem; David's unreasoning fear of the man still made no sense. She and David, after all, were *white*.

"That's your whole problem," the man with the gun said. "You're white."

And now here she stood, cold and aching in the wet pre-dawn, knowing herself finally to have been judged and found wanting, the deaths of her husband and their four servants weighing against her in the balance. She knew that judgement had been passed, and she knew the sentence. She wanted it all to end.

But she didn't want to die.

"I don't want to die," she said aloud. The sound of the words frightened her terribly: the sound of her own voice and that word, *die*.

"Nobody does," the man said.

For some strange reason that surprised her. She thought about it: *nobody wants to die*. She understood that; she could understand it now.

"Then again," the man continued, "A lot of people die."

The word repeated itself over and over in her mind, and it was her own voice that repeated it: *Die . . . die . . . die . . .* It was the judgement: she knew the final certainty of imminent death. Her heartbeat seemed to slow into long heavy throbs, their interval growing and their intensity deepened. Her teeth were vibrating against each other, clicking feverishly, jaws locked in tension. Something warm began to run down her legs.

Her knees buckled, and she threw herself forward in supplication, grovelling on the ground at the man's feet, sobbing out incoherent words and phrases but hearing in her thoughts only the single endless echo of her plea: *I don't want to die*.

He shot her. He hardly moved except to lower the gun's sights. His trigger-finger tightened in three quick spasms.

The first bullet ripped down into her back, cutting across a shoulder blade like a hot knife, then tearing into her spine where it fragmented. The second bullet went into her head, in back, near the base of her neck. The third bullet followed the second, but higher on her crown. Her body jerked in spastic rigidity, then went limp.

The man climbed slowly to his feet.

"Was it worth it?" he asked.

Mari-Ellin made no answer.

—Ted White

COMING NEXT MONTH

In April *FANTASTIC STORIES*—A DOUBLE BLOCK-BUSTER—TED WHITE'S long-awaited short novel, (the sequel to PHOENIX PRIME) WOLF QUEST and JOHN BRUNNER'S, new Traveller in Black short Novel, DREAD EMPIRE.

Calvin W. "Biff" Demmon—as the author of "Servo" is known to his friends—may well be the next B. Traven. Irascible, a hermit by nature, and reputedly a fugitive from Argentina, he lives a sheltered life and is known to those who know him only as a mysterious box number. His strangely schizophrenic stories appeared for a brief period in the early sixties in The Magazine of Fantasy & Science Fiction, *and then he dropped completely out of sight for six years. His return to publication here with a new story marks perhaps a turn in his career, and we hope to publish more of his unusual "stories" in issues to come. He tells us he has completed a "mainstream novel" which may be the next* Treasure of Sierra Madre—*and that he rejected an offer from Philip K. Dick to collaborate on another novel.*

SERVO

CALVIN DEMMON

Illustrated by STEVE HARPER

ON THE Planet Servo, Underwood wiped the chicken grease from his hands on his white chef's apron and sighed. He daydreamed of Earth, a planet he had never seen. Though Earth was overcrowded, you could buy a place there if you had the money—just as you could buy *anything* on the Planet Servo. Underwood was a contracted servant, but his contract was just about up, and when it ran out, Underwood was going to take a one-way trip to Earth.

He had plans for his life on Earth. Big plans.

Servo was a planet made by men to serve men's pleasures; it was completely hollow, an artificial stainless steel ball segmented into compartments where every conceivable pleasure was offered. Given four or five days notice, the Servons could arrange practically anything. If you wanted it, and if you had enough money, they could set up a replica of the Coliseum in Rome, in Tri-D, complete with live gladiators and live Christians, just so you could turn thumbs down and watch the Christians die. (For a small extra fee, the Christians would actually die; any illusion could be made reality if you could afford it.) But most of the compartments on Servo were given up to lesser pleasures. You could eat broasted chicken, for example, in a genuine Captain Anderson's Southern Chicken Palace, redone to scale exactly as the original Captain Anderson had first built his in the middle of the

twentieth century. You could ride on a pony, led by a uniformed guard, around a ring. You could go to sleep on a mattress, with a woolen blanket over you, and you could sleep as long as you wanted to—four or five hours, if you could afford it. Everything on the Planet Servo was geared to providing pleasure for whomever could pay for it.

Underwood's job was broasting the chicken in Captain Anderson's Southern Chicken Palace.

By the standards of the day, on a universal basis, it was a terrible job—for most of the citizens of the Solar System had to work only two or three days a year, on National Work Days, when everyone went to work fixing the machines which worked for everyone during the rest of the year. But by the standards of the Planet Servo, Underwood's was a soft job. After all, he wasn't one of the low-paid professional Christians who sat around waiting for their names to be chosen out of a hat for Coliseum duty. Nor was he required to sweep up after the pony. All Underwood had to do was broast chicken.

But Underwood hated his job. He was a vegetarian by conviction and he hated handling the dead chickens. He felt that every living thing should be allowed to live out its life on its own, without any interference from hungry rich people or from chicken breeders. He had occasionally had to watch Captain Anderson kill a chicken, out in the enormous compartment behind Captain Anderson's Southern Chicken Palace, and the memory of the squawking and the bloody flopping haunted his sleep, especially after a busy day.

But Underwood had been contracted for at birth; it was, he had been told, the only way his parents could afford to have him. Apparently they had wanted to have a baby very much, but living space on the Planet Servo was limited, and Servons who wanted to have children (or who found themselves having them) were required to guarantee that the children would work from the ages of eight to eighteen so that they could earn their passage away from the planet.

Underwood was, according to his papers, seventeen. He did not remember his parents, nor did he know what had happened to them. Somewhere in the depths of his mind was a carefully guarded idea, never examined too closely, that they had probably been sacrificed in some way for someone's pleasure. Underwood had been broasting chickens for nine years. He had become a vegetarian when he was twelve, after broasting over 14,000 chickens.

Captain Anderson's Southern Chicken Palace was easily one of the most popular attractions on the Planet Servo. There were no chickens to be found anywhere else, on any other planet. Captain Anderson's great-grandfather, the great-grandson of the Captain Anderson who had founded the Chicken Palaces, had escaped just before the War That Finally Did It with two hens and a rooster, and he had wisely refused to let anyone have any of the chicks they later produced when he landed on the small asteroid that he built up, over the years, into the Planet Servo.

There was a diner on the Planet, in a compartment fitted out to look like the inside of a streetcar, where you could get scrambled eggs for breakfast (although they were very expensive and were usually only served at the most exclusive dinners), real eggs from Captain Anderson's chickens, but Captain Anderson sterilized the eggs with hard radiation before he let them be taken from the enormous chicken compartment behind the Southern Chicken Palace, so that no one could smuggle them off the Planet Servo and hatch them. Captain Anderson's life had been built around his chickens; he had been raised luxuriously on the profits from the largest (and only) chicken farm in the Universe, and he was not about to see his monopoly escape in somebody's luggage.

Underwood separated the wings and legs from a freshly broasted chicken—a chicken he had, quite possibly, been very friendly with just days before. Although he had been broasting chickens for nine years he had not yet gotten over his sympathy for them. He found them to be extremely intelligent and companionable, and he liked to let a few out now and then to follow him about.

Underwood had eleven more months to go before he would get his passage to Earth, from Captain Anderson, and he didn't think he could stand it.

He was cutting the chicken up for Kathy Craft, a young Servon girl who really didn't like broasted chicken, but who really did like Underwood. She ate most (or part of) a broasted chicken every day at the Chicken Palace, just so she could talk to Underwood. As a result, she was plump, and her skin was oily.

To Underwood, she looked like a

freshly broasted chicken. He felt sorry for her, as he did for all the chickens.

Kathy was sixteen, and worked as an usher in the Color Movie. She had a slight scar over her right eye, where she had been hit by a flying popcorn box, flattened by a fifty-eight-year-old businessman so that it would sail through the air, aimed at Kathy. The businessman had paid a lot for the privilege, although Kathy didn't know that—nor did she know that it had all been arranged in advance. Captain Anderson was not above getting a little extra out of his help. After all, he reasoned, didn't he feed them all the broasted chicken they could eat, from the time they were old enough to swallow solid food to the time when they left the Planet Servo?

Underwood, the vegetarian, put up with Kathy because her father owned the only vegetable stand on the planet. If it hadn't been for Kathy's father, Underwood might have starved to death, for the only other foods suitable for a vegetarian on the planet were the white bread and the strawberry soda, along with an occasional can of spaghetti with cheese sauce—and these were all delicacy items and hard to come by if you didn't know somebody. The only inexpensive food for the help, besides the chicken, was the reprocessed food from the living compartments. Over the years, however, it had become largely reprocessed broasted chicken.

Underwood took his vegetarianism seriously. He would die of starvation before he would eat another piece of meat.

Today, Kathy had brought him three tomatoes and a small onion. Underwood could make a thin soup of these vegetables which would last him two or three meals, if he were very careful.

But Kathy also brought bad news. "Daddy's closing the stand," she told him, "for a couple of days, so he can go fishing up in C-9."

Surrounded by chickens, whole, in pieces, and in the broaster, his hands covered with chicken blood and chicken fat and Captain Anderson's Special Chicken Flavoring, knowing that he would have to go out soon and sweep up the chicken bones scattered by visitors to the Chicken Palace and dump them into the reprocessor, not knowing where he was going to get anything to eat tomorrow, Underwood felt himself grow suddenly very calm.

He stopped cutting up the chicken. He laid the serrated knife down very carefully on the counter, wiped his hands on his apron, and walked out the swinging door to the chicken compartment behind Captain Anderson's Southern Chicken Palace, leaving Kathy to stare in amazement. He walked all the way through the chicken compartment, past rows and rows of stacked coops, through the door at the other end, and into Captain Anderson's office.

"I quit," he said to Captain Anderson, who was toying with a bronzed broasted chicken on his desk. "I've had enough. What are you going to do about it?"

"I'm going to put you in the Coliseum for the afternoon show," Captain Anderson said. "We're short of Christians."

"I don't care," said Underwood. "I can't cut up another chicken."

Captain Anderson, who wasn't fond of chicken himself but ate it now and then to keep up appearances, understood Underwood's feelings. But he frankly couldn't afford to do anything about it, he explained; it was a matter of business, of living space on the Planet Servo, as Underwood knew. Underwood wasn't fit for anything but cutting up broasted chickens—in fact, and Captain Anderson did not tell Underwood this, Underwood was the most efficient broasted chicken cutter Captain Anderson had ever employed. Captain Anderson supposed it was because Underwood had so much respect for chickens.

But, the Captain continued, Underwood couldn't stay on until his eighteenth birthday as a freeloader, nor could he leave before his eighteenth birthday. The rest of the planets were crowded too. Only eighteen-year-olds and over were permitted on System ships. There was no room in the rest of the System for homeless children, nor was there anything that an unskilled child could do to make a living. Although most of the citizens of the System worked only two or three days a year, it was complex and exacting work, requiring years of hypno-sleep training.

There were no broasted chickens in the rest of the Solar System for Underwood to cut up. So if he refused to cut broasted chickens for Captain Anderson, why, then, he would have to take his chances in the Coliseum.

NAKED, Underwood was tied to a post in the middle of the Coliseum with thirty other Christians. (Underwood did not know where the other Christians came from, nor did he care to ask; they came, however, largely from the ranks of tourists to the Planet Servo who overspent and could not afford the trip back. They were allowed to wait in the Christian room, while their names waited in a hat. If a family member came to bail him out before his name was called, a Christian could go home. Otherwise, he waited, and ate broasted chicken. It wasn't a bad life. There were hundreds of Christians in the Christian room, some of whom, thanks to good fortune, had been there for a number of years. Some of them had come to the Planet Servo, in fact, as volunteer Christians, subsidized by the Government, when they were found unfit for hypno-sleep training and were offered the choice of passage to the Planet Servo, for Coliseum duty, or immediate processing into the public food utilities.) There were thirty gladiators in the ring, mostly vacationing businessmen who had paid dearly for the privilege of being gladiators. Each carried a sword, a knife, and an instant camera with which to take souvenir pictures.

Underwood realized that he didn't have a chance.

As the small, wealthy audience turned thumbs down on the Christians, the gladiators huffed forward, spears outstretched. Some were drunk. Most didn't seem to know quite what to do. One was obviously embarrassed. He had promised to be a gladiator and bring back souvenir pictures to his family. Suddenly ashamed of himself, he lunged forward with his spear, impaled the man next to Underwood—who died (to his credit)

bloodily—and flashed four or five pictures before any of the other gladiators knew what had happened.

Underwood, the vegetarian, was aware that he was about to die (he could see that one of the gladiators had his eye on him already), but he was not afraid. He was a man of principle. He knew if it wasn't this, it was cutting up more broasted chickens. Better death, he thought.

A helmeted gladiator broke from the ranks and charged toward Underwood. Underwood stood up bravely, with his back to the pole. He had seen death countless times—in a sense, since his eighth birthday he had been living with death—and it was not a stranger to him. Looking at all those chickens, watching them die beneath Captain Anderson's hatchet, he had realized that he would end as they had some day; it was just a question of time.

The gladiator, nearly on top of Underwood, stepped back and took off his helmet. It was Captain Anderson.

"Will you reconsider?" he asked Underwood.

"No," Underwood said, "I won't."

Captain Anderson sighed and cut him loose. "Sometimes I think of you as my own son," he said. "You've got a lot of spunk in you and you stand up for what you believe in. I'll tell you what I'm going to do. I'm going to let you go to Earth."

"But," said Underwood, "I *can't*."

"Why not?" Captain Anderson asked. "Didn't you want to go to Earth?"

"Oh, yes," Underwood said. "I've wanted to go ever since I was eight years old, when I started working for you. But I'm not old enough now; you know that."

They had entered the Christian room and were passing among the Christians. Underwood recovered his clothes and stumbled into them as they walked. It was dinnertime, and Underwood could hear the Christians crunching the knuckles off of broasted chicken drumsticks.

They went through the back door to Captain Anderson's office.

"I've got something to tell you, Underwood," Captain Anderson said. "You're twenty-three."

"No, you're making a mistake, Captain Anderson," Underwood said. "I'm seventeen. I've been working for you for nine years. I'm seventeen; that's why I can't go to Earth."

"You're twenty-three, you've been working for me for fifteen years, and that's why you *can* go to Earth. Years on the Planet Servo are longer than Standard Earth Years."

Underwood understood suddenly. He ran out of the office, through the front door into the enormous chicken compartment, into and through Captain Anderson's Southern Chicken Palace, and out into the enclosed sidewalk. He didn't know where he was going. He knew only that he wanted to get away from the Planet Servo, and that he never wanted to see Captain Anderson or a broasted chicken again. He had been tricked into cutting up chickens for six years longer than he had to. He had been cheated.

Underwood's youth had been spent at the Chicken Palace. He had not explored the Planet Servo. It took only minutes for him to become hopelessly lost.

He wandered into a room where a man was taking a bubble bath. The man was soaking, reading a Movie magazine, and eating a broasted chicken breast.

He ran out through the wrong door, into a room where a very rich man was watching an old "My Little Margie" program on a video player which was made up to look like a twelve-inch mahogany console black and white television set. The man was licking broasted chicken batter off his fingers.

Out in the hall again, Underwood slipped on a half-eaten broasted chicken wing, fell, and was knocked unconscious.

HE HAD a dream in which he discovered that Captain Anderson's secret of success was that he had only one broasted chicken, which he kept serving up over and over. Underwood was the broasted chicken.

WHEN HE awoke, he was in a strange sleeping compartment. Kathy Craft, wearing a tight-fitting nurse's uniform, was standing over him. "Drink this," she said. "It'll make you feel a lot better."

It was chicken soup. He fainted.

WHEN HE awoke again, he was on a ship, bound for Earth, with 400 credits and a letter of recommendation in his pocket. It took, Underwood knew, six days to get to Earth. Kathy Craft had apparently learned of his going, for she had packed him a lunch of twelve lettuce and tomato sandwiches, two for each day of the trip. Underwood knew he would miss her. Nevertheless, he was terribly glad to be off the Planet Servo and on his way to Earth, where he would never have to cut up another chicken. He planned to buy a small farm with his money, grow vegetables, and raise chickens, which he would let run wild, completely unsupervised, until they died of old age. When Underwood was ten Captain Anderson had promised to send him a matched pair of chickens when he got to Earth. Captain Anderson knew that Underwood would never sell the chickens, and that he would guard them so carefully that no one could ever steal them, so Captain Anderson was not afraid of losing his monopoly. Besides, he had a certain affection for the boy.

Underwood did not know this, but Captain Anderson was his father, as he was the father of every contracted servant on the Planet Servo. Kathy Craft was Underwood's sister.

Six days later, Underwood was smashed back against his acceleration pad. He knew that the rockets had cut in. The pain was agonizing, but Underwood rejoiced in it. He was minutes away from stepping out on the planet he had never seen, but had dreamed about nightly for nine (no, fifteen!) years.

The door to his compartment opened. He stepped out and found himself across the corridor from Captain Anderson's Southern Chicken Palace. His eyes opened wildly, and he whirled around. He had spent six days in the Earth Trip Rocket Simulator, one of the least popular and most inexpensive pleasure compartments on the Planet Servo.

"Did you change your mind yet, boy?" asked a voice behind him. He whirled. It was Captain Anderson. He was smiling.

"You cheated me again," said Underwood. He hit Captain Anderson in the face. Captain Anderson stopped smiling and began to back away. Underwood hit him again.

Captain Anderson backed into his office and Underwood followed, swinging wildly. Captain Anderson grabbed a shiny object from his desk and tried to shield himself with it. It was the bronzed broasted chicken.

"Wait!" Captain Anderson cried. "You don't understand!"

"You tricked me again!" Underwood screamed, and he swung, hitting the bronzed chicken. His knuckles cracked and he moaned in pain. He snatched the chicken and hit Captain Anderson on the head with it. Captain Anderson collapsed, and the chicken popped in half, opening like a book, with hinges along the backbone. Inside was a small tape recorder which began playing.

"This is Captain Anderson speaking," said the recording, as Underwood stood over Captain Anderson. Captain Anderson appeared to be dead.

"I am, of course, dead," said the recording of Captain Anderson's voice. "This machine is keyed to a switch in my chest which will activate a tiny transmitter if my heard should stop. There are similar bronzed broasted chickens located in every compartment in the Planet Servo, behind concealed doors which have now opened, and in my lawyers' offices on Earth and on Mars. They are playing in concert. This is my last and final will. As my lawyers know, but as none of my employees know, my contracted laborers here on the Planet Servo are all my sons and daughters, in a peculiar, although perfectly legal, fashion. When I was a young man I realized the folly of marriage, but, being a businessman, I also realized that, had I a lot of children, they could help me in my broasted chicken business, as well as with the other chores here on the Planet Servo. I therefore sought out a leading biochemist, who took several genetic specimens from me and implanted them in carefully treated eggs. I leave the Planet Servo to my children, who will now appreciate how much chickens have meant not only to me, but to them. The eggs in which my specimens were implanted were chicken eggs. My children: your mothers were all chickens, chickens carefully raised here on the Planet Servo.

"To *my* mother," the tape continued, "I leave my collection of Chicken Little Coloring Books. The sky is falling, Mother."

Underwood, now fabulously wealthy, fainted, squawking. He cheeped feebly for a few minutes, and was silent.

—Calvin Demmon

COMING JUNE FANTASTIC STORIES

On Sale Mar. 25th—POUL ANDERSON'S latest new novel, THE BYWORLDER.

GEMINI CAVENDISH

Gordon Eklund's previous stories ("Dear Aunt Annie," "A Gift from the Gozniks") have appeared in our companion magazine, FANTASTIC STORIES, and have been distinguished by both their innate quality and the fact that they have in no way resembled each other. The story which follows fits the same "pattern" . . .

GORDON EKLUND

Illustrated by JEFF JONES

WHEN Gemini Cavendish was only thirteen-years-old, his father, Howard Campbell Cavendish, made the fatal mistake of tossing the wrong piece of paper into a waste disposal unit. As soon as the paper hit the can, Mr. Cavendish's Index Rating, which had never been particularly high, dropped to a personal low point of 3.97. He was immediately reclassified as Population Overage Waste. Two black-uniformed attaches entered his office, tapped him on the shoulder, and led him away for disposal. Mrs. Cavendish was promptly notified of the revocation of her housewife's deferment. She was given eight days in which to prepare for final disposal.

All of this left young Gemini Cavendish quite alone in the world. At first, he failed to notice the disappearance of his mother and father. This was not surprising. He had seen neither of them since he was three-years-old.

A consultation was required in order to determine Gemini's fate. Although he'd been born with a promising 6.3, his Index Rating had steadily declined throughout his short life. Fortunately for him, the Population Ratio within the Greater Pacific Metro was running well below the statuatory limitation. A determination of reestablishment was reached in his case. Gemini was to be forwarded without delay to the Arnold Reestablishment Workshop, where, it was hoped, his Index Rating could be raised and a proper place found for him within Arnold's Vast Scheme.

A helicopter arrived at the Cavendish residence and whisked Gemini away toward the Arnold Workshop, which, as every schoolboy knows, was located in the lower levels of Mount Whitney. Gemini knew very little about anything, but he did know that everything connected with Arnold had to be for the greater good. Arnold, of course, was the first Great Mind of America, possessor of a Continuous Ten Index Rating and, in a choice phrase, savior of his race.

The helicopter landed on top of the mountain, and Gemini was soon thrust into a confusing maze of descending

elevators. At last he found himself alone in a large room. The room was empty except for a huge flashing neon sign. The sign said: "HOME".

Gemini plopped down in the middle of the floor and rested his chin in his hands. He studied the sign and waited for it to act.

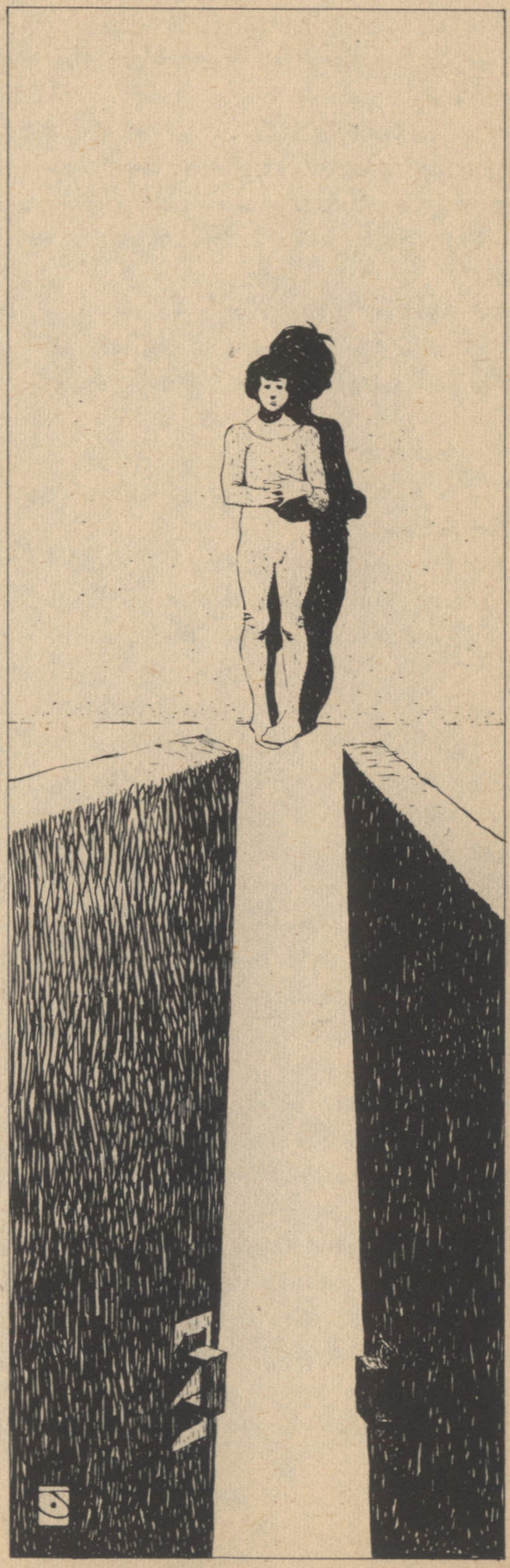
At last, a voice boomed from nowhere, a deep but reassuring voice: "Gemini Cavendish," it said, "welcome to your new home."

Gemini jumped to his feet and saluted. "Thank you," he said. "Thank you very much indeed."

"And you're very, very welcome indeed," said the voice. "In case you're wondering, I am the Spirit of the Arnold Reestablishment Workshop. It is my pleasure to welcome you to our little school and to answer any questions that you may have."

"I don't have any questions," Gemini said, although actually he was very curious indeed. "I just like to wait and see what happens."

"An intelligent attitude, young man, a very intelligent attitude indeed. I see that you're going to fit in very nicely here. Now—" clearing his throat, if he had a throat—"I am required by regulation to inform you of certain facts. The Arnold Reestablishment Workshop was designed and constructed with a single purpose in mind: To take boys and girls of low birth and, through revolutionary teaching techniques, reestablish them within the format of Arnold's Vast Scheme. Here at the Arnold Reestablishment Workshop, your single most important product is your Index Rating. Watch it, conserve it, and with all due effort, raise it. If at



any time your Rating indicates a lack of reestablishment on your part, you will be classified as waste and disposed of in the proper fashion. This is not a common occurrence. In fact, among children of relatively high birth, such as yourself, it is a very rare one indeed. The more likely event is your graduation from the Workshop at the age of eighteen, your Index Rating flying haughtily in the breeze, an important cogship awaiting you within the Scheme."

"It's sort of like a school then," said Gemini.

"*No*," said the spirit. "It is not 'like a school.' It is not at all 'like a school.' "

"But you said something about—"

"That will be enough," said the spirit. "It is my duty to inform you that your Index Rating has just declined to a personal low of 4.77. I would suggest personal contemplation of these events, and total utilization of any insights for future guidance."

"Yes, sir," said Gemini. He dropped to the floor and tried to contemplate. But before he'd achieved any notable insights, two black-uniformed attaches entered the room, tapped him on the shoulder, and beckoned him to follow.

The attaches led Gemini through a confusing maze of poorly illuminated corridors. After many long minutes of walking, they halted in front of an open door. They stepped inside and Gemini followed.

They were in a room, a large room, with a dozen or more boys of varying age. The only furniture in the room consisted of two long rows of bunk beds. The beds were covered with dull brown blankets, tightly drawn, and behind each of them was a large wall locker.

"These are your permanent quarters," said one of the attaches. "Your bed's the fifth one down, on the left. You'll see your nameplate. When the bell rings, you jump. Got it?"

Gemini nodded, and the attaches left.

He walked down the narrow center aisle and counted bunks. When he reached the fifth bed on the left, he stopped. His name jumped out at him in dazzling red letters. Below the name, in flashing orange neon, was a number—4.77. Gemini sat down on the bunk and folded his hands in his lap.

"Lucky little bastard," said a voice "Just got here and already in a bottom bunk."

Gemini looked up, searching for the source of the voice. A face was dangling over the edge of his bed. It was an old face, maybe sixteen or seventeen, and it wore an upside-down grin.

"Hi," said Gemini to the face. "I'm Gemini Cavendish."

"I know. I've been expecting you." The face disappeared. There was a scrambling sound from the upper bunk, and the face (with a body) appeared on the floor next to Gemini's bed.

"I,m George Blackley, and I live upstairs. I was hoping you'd get here today. I don't like it without a mate."

"We're going to be playmates?"

"Huh? Oh, you mean like in Artificial Environment? No, this is different. You ever known any real people before?"

Gemini thought. There had been his mother and father, but he'd never seen much of either of them. Lately, he'd seen a lot of attaches, but they never talked. There was the spirit, but he didn't seem very real.

"No," he said, finally. "I guess I haven't."

"You've got a lot to learn. You sheltered kids get dropped in here, and you don't know a thing—not a thing at all. Nine times out of ten, you're waste within a month. Now, you take a kid who's born here. He stays in the nursery till he's eight. By the time he gets to the barracks, he already knows what's going on. He makes it out just about every time."

"The spirit at the gate told me—"

"The spirit? You mean they're still pulling that old stuff. Here, let me give you some facts. The kid that used to sleep in your bunk, his name was Stan. About a week ago, he woke up in the middle of the night. He had a creepy feeling. He knew something was wrong, but he didn't know what. The day before he'd taken a special exam. He didn't remember any of it—you never do. Anyway, like I was saying, he got out of bed and took a look at his Rating. There it was—glaring right up at him—3.9. Now, Stan knew you had to carry a four to stay alive in this place. He woke me up, and he was really shaking. But before I could say a word, there was a big black attache standing right at Stan's elbow. I never saw the kid again. Stan came here just like you. He lasted about wo years, but he never made it much over five. Pretty soon, it just caught up with him and—*plunk*—he's waste."

"I see," Gemini said, still a bit confused. "Does this happen often?"

"Damned right it does. Here, let me show you something else." George led Gemini to a bunk on the opposite side of the room, about five down from their own. A boy lay on the bed, his eyes shut, his body still. Even his breathing seemed hushed and controlled.

"This is Jack Matson," George said, softly. "He was the last guy to come in here before you, about a month back. Take a good long look at his Rating."

Gemini tore his gaze away from the motionless boy and focused on the orange neon nameplate. The number was bright and clear: 4.02.

"That's as close as you can get and still stay out of the can," said George. "Jack's been carrying that around for nearly a week now. He's so scared he won't even move. Never goes to class. Pretty soon, they'll come and get him, make him do something. Chances are, when he does, he'll be so tight he'll do it wrong. Then they'll have him."

"Waste," said Gemini, quietly.

"The only place you're safe is right in this room," George said, walking back to his bunk. "They don't bother you in here. But as soon as you step outside the door, you're vulnerable. Don't make a wrong move, or down you go."

Gemini sat on the bunk next to George. "You've been here a long time, haven't you?"

"All my life—I'm low-born. Started out with a 3.2 and pushed it up to a 6.17, as of yesterday's tests. Could make it a lot higher, too, if I wanted. I know how this place works. I can play

it like it's some kind of big piano. I've only got a little while to go till I'm eighteen. I figure on carrying a seven out of here. That ought to put me into a nice, healthy cog, maybe even one with a wife allotment."

Suddenly, there was a sound—a high-pitched, screaming, piercing sound. A bell was ringing. George jumped to his feet and raced toward his wall locker. His hands darted inside and emerged with a heavy load of books. He tossed three of them to Gemini.

"Here, take these. They're Stan's."

"But," said Gemini. "That bell. The attache—"

"That's class. When it rings, you jump. Here—come on, follow me."

George moved quickly out of the room, Gemini followed his heels. The hall was filled with streaming boys, books clutched tightly in their arms.

"But I can't go with you. We're not in the same class." Gemini struggled to keep pace with his racing bunkmate.

"It doesn't matter. Everybody's in the same class."

"But—"

"Shut up and listen. Don't pay any attention to what they teach in there. It doesn't matter. It's how you act. Take notes, read your books, and stay alert. Do that and you'll make out."

The boys ahead of them had formed into a line and were silently filing through two huge doors. Gemini and George dropped into place.

"Is this it?" Gemini asked.

George nodded and whispered, "No more questions. You're not supposed to talk inside."

They passed through the doors, emerging inside a huge, brightly lit auditorium. Long rows of neatly arranged roofless booths lined the wooden floor. Attaches scurried about, acting as ushers, their faces wooden and emotionless. George and Gemini were taken aside and led toward the front of the room. Two booths were opened to them, and they were locked inside.

Inside his booth, Gemini looked around. It was large and except for a single chair, empty. He sat in the chair and, as he did, it tilted back, giving him a clear view of the ceiling. As he'd entered the booth, he'd been handed a single sheet of paper. He read it now, carefully scanning the nearly blank page. At the top was a two-word message: "THE ALPHABET". The rest of the sheet was blank except for three short sentences near the bottom in small type: "OPERATE CONTROL PANEL FOR ANSWERS. TAKE COMPLETE NOTES. PANEL WILL REFLECT INDEX RATING."

Gemini scratched his head and read the message again. Then, raising his head and peering about, he tried to locate the "control panel." He found it directly in front of him, near the top of the booth, within easy reaching distance. The top of the panel contained a series of twenty-eight buttons. The top two were labeled "YES" and "NO". Below these were twenty-six more buttons, one for each letter of the alphabet. At the bottom of the panel was a small television screen. It was blank.

Gemini folded his hands and waited for something to happen. He stared at the flat, white ceiling. Five minutes

passed. All was silence.

Then a voice spoke, breaking the silence. Gemini had heard the voice before. It was the voice of the spirit.

"Punch your name on the panel." It repeated itself once, then again. "Punch your name on the panel."

The request seemed simple enough. Gemini leaned forward and pressed the letter buttons for his name. As he did, his name appeared below on the television screen, neatly printed in small blue letters.

Gemini settled back in his chair, satisfied at the satisfactory completion of his first assignment. The television screen flickered and two additional lines appeared below his name: "PRIME INDEX RATING: 4.77. ADJUSTED INDEX RATING: 4.77."

Gemini scratched his head, puzzled. But he was given little time for thought. Above him, the ceiling came alive.

Gemini looked upward and watched, transfixed, as the ceiling burst into flames. Vast spirals of red and yellow light twisted and churned, molding together into seemingly recognizable patterns, only to explode again, flowing gently across the ceiling. Underneath the bright cover of light and color, a film was playing. Gemini caught only fleeting glimpses of faces and movement. It was impossible to discover any pattern behind the flickering images.

The light stopped. Again, the ceiling was a broad sheet of white. Then, it turned red. Gemini jumped at the abruptness of the change.

A circle of white appeared in the center of the red. Only inches wide at first, it slowly expanded. When it was a full six feet in diameter, it stopped and, in the center of the circle, a red letter appeared. It was the letter "A".

Seconds passed without movement. The seconds became minutes, and still nothing changed. The vast red sheet, the circle of white at its center, the small red "A".

Five minutes passed. Ten, and still no change. Gemini dropped his eyes from the ceiling.

He saw the change, and he jumped. His "ADJUSTED INDEX RATING" was no longer a steady 4.77. It now read 4.72 and as he watched, the last digit changed: 4.71.

What was wrong? Why was his Rating dropping? He reached out and slapped the screen with the edge of his hand. His Rating dropped again: 4.69.

He remembered now—*notes*. George had said, no matter what, keep taking notes. Gemini grabbed his notebook and flipped it open. Quickly he wrote, words and letters, whatever came to mind. He tossed furtive glances at the screen. His Rating remained steady at 4.69. He wrote faster, hoping to drive it back up.

The voice spoke: "You have ten seconds in which to answer the question. Nine . . . eight . . . seven . . . six . . ."

Question? What question? In desperation, Gemini looked at the ceiling. It had changed. The red and white were gone. In their place was a vast green question mark which stretched from wall to wall.

There was only one chance. At "one second," he lunged forward and hit the "YES" button.

A sharp ring filled the booth, stinging his ears. He reached out again, this time hitting "NO".

"Only one answer per question, please."

Gemini looked at the screen and groaned. 4.63.

And the ceiling was moving again. It progressed rapidly through its changes of light and color, finishing this time with the letter "B" centered in the white circle.

Gemini wrote the letter "B" in his notebook, then quickly returned his eyes to the ceiling. This time he wouldn't miss the question.

But there was no question. The "B" disappeared, and the ceiling churned with life. Gemini wrote: "No question; screen moves."

This time, the contortions were finished even more quickly. The letter "C" appeared and quickly faded away.

Gemini jotted the letter in his notebook and waited. The spirit spoke suddenly, interrupting his thought: "Pupil is not referring to his textbooks." His Rating fell: 4.60.

Hastily, Gemini grabbed one of the books George had loaned him. It was a history of Arnold's Scheme. Gemini opened the book and held it in his lap. As he read, he tried to keep one eye focused on the ceiling. Occasionally, he stopped and quickly jotted a few notes in his book.

When the question came this time, he didn't miss it. As it moved toward the letter "G", the ceiling suddenly went blank and a series of words appeared: "WHAT IS YOUR FAVORITE COLOR?" The words slowly faded away and were replaced by a huge green question mark.

Even before the spirit began its countdown, Gemini started tapping out his answer. He hit the letters quickly—R . . . E . . . D. At the last letter, his Rating changed, this time upward: 4.63. Gemini grinned. He seemed finally to be getting the hang of things.

Four hours later, the door of his booth opened, and he was set free. It had been four long hours of misery and failure. His Index Rating seemed to drop at the slightest error and rise again only with the application of massive effort. Gemini turned as he left the booth and looked once more at his new Index Rating: 4.47. He shook his head and walked slowly toward the doors.

George was waiting for him in the hall. "How'd it go?" he asked.

Gemini shook his head, eyes downcast, ashamed. "Down thirty," he said.

"Not bad." George grinned. "I've seen kids drop fifty their first day here."

"I don't have much to spare," Gemini said. "If I drop fifty, I'll end up in the can."

"Oh, don't worry about it. You'll get better. The classes are nothing. It's the special exams you have to worry about. If they can you, that's where it'll happen."

"Special exams?"

"You'll find out about them. Come on—we better get back to the room." George turned on his heel and walked quickly away. Gemini slowly followed.

Time passed slowly for the residents of the Arnold Reestablishment

Workshop. Three or four hours a day were spent in classroom activities, but the rest of a resident's existence was one long, uninterrupted slice of boredom. For Gemini Cavendish, who quickly stabilized his Index Rating at the 4.50 level, it was worse than disposal.

"I'm just about ready to call them up and tell them to take me away," Gemini confided to his bunkmate one day, about a month after his arrival. "There's nothing to do around here, except stare at the walls. I tell you, it's killing me."

George sighed and looked up from his book. "Boredom's part of the game, Gemini. You just have to get used to it. I told you—when there's nothing left to do but be bored, then you're bored and happy with it."

"Well, I can't get used to it. At home, I had all sorts of artificial playmates. I mean, we always found something to do together."

"A good cog is always bored," George said, quoting one of Arnold's Ten Maxims. "It's the nature of his position to learn how to tolerate it."

"My father was a good cog," Gemini said.

George yawned and said, "Oh?" Lately Gemini had frequently fallen into long fits of reminiscence, which seemed to make him happy but bored his listeners stiff.

Gemini continued: "He was a fine man, a paper destroyer in the main attache factory in San Francisco. His job was to go through all the day's accumulation of waste paper and make sure it was supposed to be thrown away. It sounds easy, but it's really a very essential cog. When I was a little kid, he used to take me to work with him sometimes. He'd let me throw paper away for him, and he really seemed to enjoy having my company. But once, when I was about three, I made a mistake and threw his desk calendar into the can. They dropped him ten points for it, and I don't think he ever forgave me. The next day, he and Mom locked me upstairs. I had a robo-nurse and an artificial environment, but that was all. I never saw my parents again."

George mumbled something and tried to read. He'd heard the story before—a dozen times in the last month.

"And you know what, George?"

"No, Gemini. What?"

"I think they really loved me—in their own way."

But life was not entirely sweet for Gemini Cavendish. He still had one great fear, something he refused to allow himself to forget. The special exams.

Little was known about the exams, only that they seemed to be given to random people at random times. In his nearly ten years in the Workshop, George had been administered seven special exams. Three years had passed since his last one. He remembered nothing of them, but neither did anyone else. George thought they required one to perform certain functions. But that was only a guess, based upon vague memories and an infrequent rumor. It was generally agreed that some sort of drug was administered to each examinee, causing him to lose memory of the

actual test.

During Gemini's month at the Workshop, three people had been taken away for exams. Of these three, two had never returned. The third had seen his Rating jump a full fifty points as a result of his test. George said it was always like this. Either one's Rating went way up, or it went way down. People with 5.0 Ratings often ended up in the can on account of a single special exam.

Gemini lived in constant fear of the day when they'd come to get him. He knew he could never face such a final test, knew he could never survive to return to the warmth of his bunk.

When they finally came to get Gemini, George smiled brightly. In the few short months of their relationship, George had quickly developed a steady dislike for his young bunkmate. When he saw the tall black-uniformed attache standing at the end of the bunk, George laughed.

"Hey, Gemini," he said. "Look."

"Look at what?"

"Just look."

Gemini looked. Then he gulped.

"Gemini Cavendish," said the attache. "You are to come with me."

"What for?" said Gemini. "I haven't done anything."

"You are scheduled for a special examination. I have been instructed to forward you to the testing lab. You will follow me, please."

"Don't I—don't I need my books?" asked Gemini. A special test—and why now, of all times? Just a few hours earlier, he'd lifted his Index Rating past the 4.70 level, the highest it had been since he'd arrived at the Workshop.

"No study materials of any kind are necessary. I must ask you, please, to hurry. Our test load is especially heavy today."

Gemini got to his feet and moved slowly toward the door. The attache walked past him at a fast clip and waved at Gemini to follow. He had no choice but to fall into step behind the quick moving man.

"I hope that drip hits the can," George announced. "I really hope he does." There was a general murmur of agreement from the rest of the room.

The attache led Gemini to a spot he recognized immediately. The giant neon "HOME" smiled down at him.

"Spirit?" he called. "Are you home?"

There was no answer. Gemini sat down on the floor, feeling depressed and lonely. He occupied his mind with the possibilities of survival. If this room were the way into the Workshop, perhaps it might also be the way out. Perhaps there was no special exam in store for him; perhaps it was merely a means by which he could be hustled away from the jealous residents. An idea came to him—an explanation. His Aunt May had decided to take him in and make him her heir and ward. She had a permanent 9.99 and needed a friend and companion. In a few years, she would pass away, leaving Gemini both her money and her Rating.

The spirit cleared its throat and announced: "I am the Spirit of the Arnold Reestablishment Workshop. It is my duty to instruct Gemini Cavendish in preparation for his special examination. Is the pupil present in the homeroom?"

"Yes," said Gemini. (Aunt May

disappeared with a pop.) "I'm here."

"When I have finished speaking," the spirit said, "you are to enter a room through the door to your right. You are to remain in that room until you are notified of the completion of the exam. This is primarily a test of your ability to remain calm under extreme pressure. You are reminded to act the truth at all times."

Gemini nodded and looked at the door.

"You will now enter the room," said the spirit.

Gemini took a deep breath, stood, and walked toward the door. When he reached it, he grasped the knob and opened the door. He walked quickly past the threshold and shut the door softly behind him.

He found himself inside a small, unfurnished room. The walls and ceiling were painted a dingy gray. At the opposite end of the room stood another door, partially open. Standing inside the doorway was George Blackley.

"George?" said Gemini. "What are you doing here?"

"I'm here to kill you, Gemini Cavendish," said George. He grinned and raised his left hand. The hand held a long, sharp hunting knife. The blade glistened and flashed.

"George?" said Gemini. "George?"

Holding the knife in front of him, George stepped forward.

Gemini ran. He crashed into the door and fell to the floor. Scrambling to his feet, he grabbed for the doorknob. He turned it and pushed. Nothing happened. He tried again. Nothing. The door was locked—locked from the outside.

Gemini wheeled. George was advancing, the knife held waist-high in front of him. Gemini's eyes bulged, and he wanted to cry.

George raised his hand, and the knife fell. Gemini screamed in agony as he felt the blade slide past his shirt and ram into his belly. He fell to the floor, rolling in his own blood. Through clouded eyes, he saw George standing above him, arms folded, waiting for him to die. Then he passed out.

When he woke, he was lying on his back. The floor beneath him was cold and hard. His back ached, and his mouth tasted of stale cotton. He climbed carefully to his feet. His legs were weak, but they held him.

He shook his head and tried to remember. Where was he? This room . . . what?

Abruptly, he remembered everything. He remembered the test, and George. He remembered the knife. He looked at his stomach, holding his breath. There wasn't a wound. His shirt was clean and whole.

He walked toward the door and tried to open it. He couldn't; it was still locked. He turned around, blinked his eyes, and gasped. There was someone else in the room, someone who hadn't been there before.

It was a girl. She was young, beautiful, and nude. She was lying on an unmade bed.

"Who—?" said Gemini.

"You are Gemini?" asked the girl, her voice soft and musical. "Gemini Cavendish?"

"I am Gemini Cavendish."

"I want you to love me," she said. "Please. Now."

"Now?" said Gemini. "Me?" Sex

was seldom allowed any cog unless he'd achieved a seven Rating.

"Yes, of course. My darling. Now." The girl sat up and stretched out her arms. "Please."

Gemini stepped forward. He tried to recall the sex training he'd received in artificial environment. As he approached, the girl dropped back on the bed. She smiled.

Gemini sat down next to her. Tenderly, he leaned over and kissed her lips.

He pulled away with a yelp. A tiny trickle of blood ran down his chin.

"Hey," he said. "You bit me."

"I couldn't help it," said the girl. "I find you irrestible." With a quick motion, she darted her hands beneath the bedcovers and drew out a small black pistol. She waved it in the air, pointed it at Gemini, and fired. He collapsed, hitting the floor with the back of his head.

He woke with a splitting headache. He lay on the floor of a small, unfurnished room. It was painted a drab and lifeless gray. He sat up slowly and held his head.

The test. He could remember the test but . . . There was something else. He tried to remember, but the pain only increased.

A sudden noise startled him. Looking up, he saw a man entering the room through the opposite door. He wore a wrinkled blue suit and held a wadded ball of paper in one hand. He tossed the paper into the air and caught it.

"Gemini, lad, come here. I want to tell you about paper disposal."

Gemini got to his feet. He knew the man. "Father," he said, rushing forward. "You've come for me at last."

"Son," said Howard Campbell Cavendish. He caught Gemini in his arms and drew the boy close to his chest. "I'm sorry I must kill you."

Gemini Cavendish had slept and wakened many times before he found himself back in the homeroom. He sat on the floor and watched the giant "HOME" as it blinked and flashed.

"Gemini Cavendish," said the spirit. "Your test is complete. You may stand."

Gemini got to his feet. His head hurt, and his muscles ached. He felt dirty, wasted, and used. His mouth tasted foul, and his brow was streaked with sweat.

"An attache is waiting for you outside," said the spirit. "He will forward you to your room."

"Can you . . ." said Gemini. "Can you tell me what happened?"

"No," said the spirit. "You will learn the results in due time."

Gemini left the room, dazed and shaken. He followed the attache through a maze of hallways and corridors. At last, a door was opened, and he was back in his room.

He walked down the aisle and found his bunk. As he moved to roll between the covers, he stopped suddenly.

His nameplate glared fiercely at him. It shouted a message. "4.01," it said. "4.01."

Gemini dropped to his bunk, sobbing. Above him, George Blackley sat. He laughed and he laughed and he laughed.

For the next five days, Gemini

refused to leave his bed. While the other boys attended class, he and George sat alone in the darkened room.

George had received definite notification of his impending graduation. He was no longer required to attend class. His Rating stood at a respectable 6.88, quite sufficient for a good middle-line cogship.

"You're going to have to move sometime," George told Gemini, on the fifth day. "If you won't they'll force you. You might as well get it over with."

"Uh," said Gemini Cavendish.

"I'm only trying to help," George said. Actually, he'd been having a number of second thoughts about Gemini. He'd decided that Gemini wasn't really such a bad guy after all, not once you got to know him. Since his return from the testing lab, he'd seemed like an entirely different person. And he never spoke a word.

"You ought to go to class," George said. "Go today—they're having the alphabet again. You'll snap through it."

"Jack Matson," Gemini said. Matson was the boy with the 4.01, the one who'd refused to move from his bunk back when Gemini had first arrived. Eventually, Matson had allowed his friends to talk him into attending a snap class. He'd taken five steps outside the room, tripped, fallen, and landed in the can. Waste.

"You're smarter than Matson, Gemini. Give it a try. Be careful. Watch your step."

"Uh."

George sighed and picked up a book. Gemini rolled over on his stomach and shut his eyes. They weren't going to get him. He'd lay here until he was eighteen. There was no way they could make him move.

Two hours later, when he opened his eyes, he saw the attache. He swiveled his head quickly. There were three of them, two on each side of the bunk, and a third standing at the end.

"Gemini Cavendish?" said the third, apparently the chief.

Gemini nodded. He knew what they wanted. Gripping the edges of his mattress, he held on with all his strength.

"A determination of your illness has been processed," said the attache. "You have been shown healthy enough to attend all required classes. You will come with us, please."

"I won't go," said Gemini.

In the upper bunk, George groaned. The attaches blinked in unison.

"But you *must* come with us," said the chief.

"I'm not going," Gemini said.

The attache found his composure and slipped back into it. He waved at his assistants. "Pick him up and carry him to class."

As they moved toward him, Gemini twisted out of their reach and rolled off the bunk. He dashed between the legs of the nearest attache and jumped to his feet. He ran to the door and threw it open. He dashed into the hallway, made a sharp right turn, and ran.

Behind him he could hear the running feet of the pursuing attaches. They screamed at him and shouted for assistance. Gemini ran faster, letting his breath slap at his throat.

He was outdistancing them. He

risked a look and saw nothing. Carefully, he slowed, then stopped. He leaned against a wall and gasped for air.

He wanted to find the homeroom, but had no idea of its location. He'd lost all sense of direction. He had no idea where he was.

He tiptoed to the nearest door and opened it. He stuck his head inside. It was a girl's room. He tried to shut the door, but one of them saw him. She yelped.

"Hey! Over here!"

The attaches. Gemini took a deep breath and ran. The voices echoed behind him. He knew he couldn't go much further. He was lost, running in circles, crashing into walls.

There were four of them right in front of him. He stopped and spun. There were five more behind him. Desperately, he lunged at the nearest door. It opened, and he fell inside.

"Gemini, please shut the door. We have some things to discuss, and we'd rather do it privately."

Gemini looked up. He knew that voice. The voice of the spirit. But this time it came from a man.

Obediently, he stood and shut the door. He caught a glimpse of the attaches waiting in the hall.

"Please have a seat," said the spirit. "We'll try to make this as brief as possible."

Gemini sat. He faced a long wooden table, behind which sat six men, all very much alike, the spirit and five others. They were middle-aged, balding, wrinkled, and sad.

The spirit cleared his throat and glanced at each of his companions. The men nodded, waved their hands, and grinned sharply.

"I want to congratulate you," the spirit said. "In behalf of myself and my staff, I want to congratulate you."

"You do?" said Gemini.

"But of course. You've only been here—what?—five months?—three months?—and you've already graduated. That's a fantastic achievement. We will expect marvelous things from you in the future."

"But," said Gemini, "I'm not graduating. I've got a 4.01 and . . ."

"Oh, heavens, you do not. That's your Adjusted Index Rating, purely a Workshop tool. Your actual Rating is a fat and healthy 5.99."

Stunned, Gemini leaned forward and said, "Does this mean I'm going to be released?"

"Exactly. I have here the required papers to forward you to a state school. You will continue your basic education there and, in a few years, a cogship will be found for your use."

"Cogship?" said Gemini.

"Cogship. I ought to warn you that this little episode just now seriously endangered your position. But since all the paperwork had been signed and sealed, we have decided to go ahead with things as they were."

Gemini sat and stared, his mouth open.

"I suppose you're a bit confused, my boy."

"Yes," said Gemini. "Yes, I suppose I am."

"That's an understandable enough reaction. You see, this Workshop is designed to confuse its residents as

much as possible. Things work backwards here. Anyone who succeeds in 'beating the course' is, almost by definition, dangerously anti-social. What we're looking for in today's young men is a total lack of creativity, aggressiveness, and imagination. I'm pleased to say that your classroom work and your special exam have shown you to fit our requirements very nearly one hundred per cent."

"George?" said Gemini. "What about George?"

"Who is this George?"

"A boy in my room. My bunkmate. He's eighteen next week, and he's got a 6.88."

"Really?" said the spirit. "My word, that's a very good mark indeed. Such a great deal of initiative in one so young. I'm afraid there's just no place for such a boy within Arnold's Scheme. It's a pity but, as they say, so it goes."

Gemini nodded. Poor George. If only he'd known enough to play dumb.

"Well," said the spirit, "you'd best be off, Gemini. An attache is waiting at the door to handcarry you to your new home. I'd like to wish you the very best of luck, and tell you what a distinct pleasure it's been having you with us."

"Thank you," said Gemini. "Thank you very much indeed."

"And you're welcome," said the spirit. "You're very, very welcome indeed."

And so, Gemini Cavendish graduated from the Arnold Reestablishment Workshop, a truly reestablished young man. His future course had not yet been fully charted, but it was hoped by all that he might someday step into the shoes of his late father, Howard Campbell Cavendish. All that was necessary was to cleanse his mind of any hidden desires to dispose of valuable desk calendars.

—Gordon Eklund

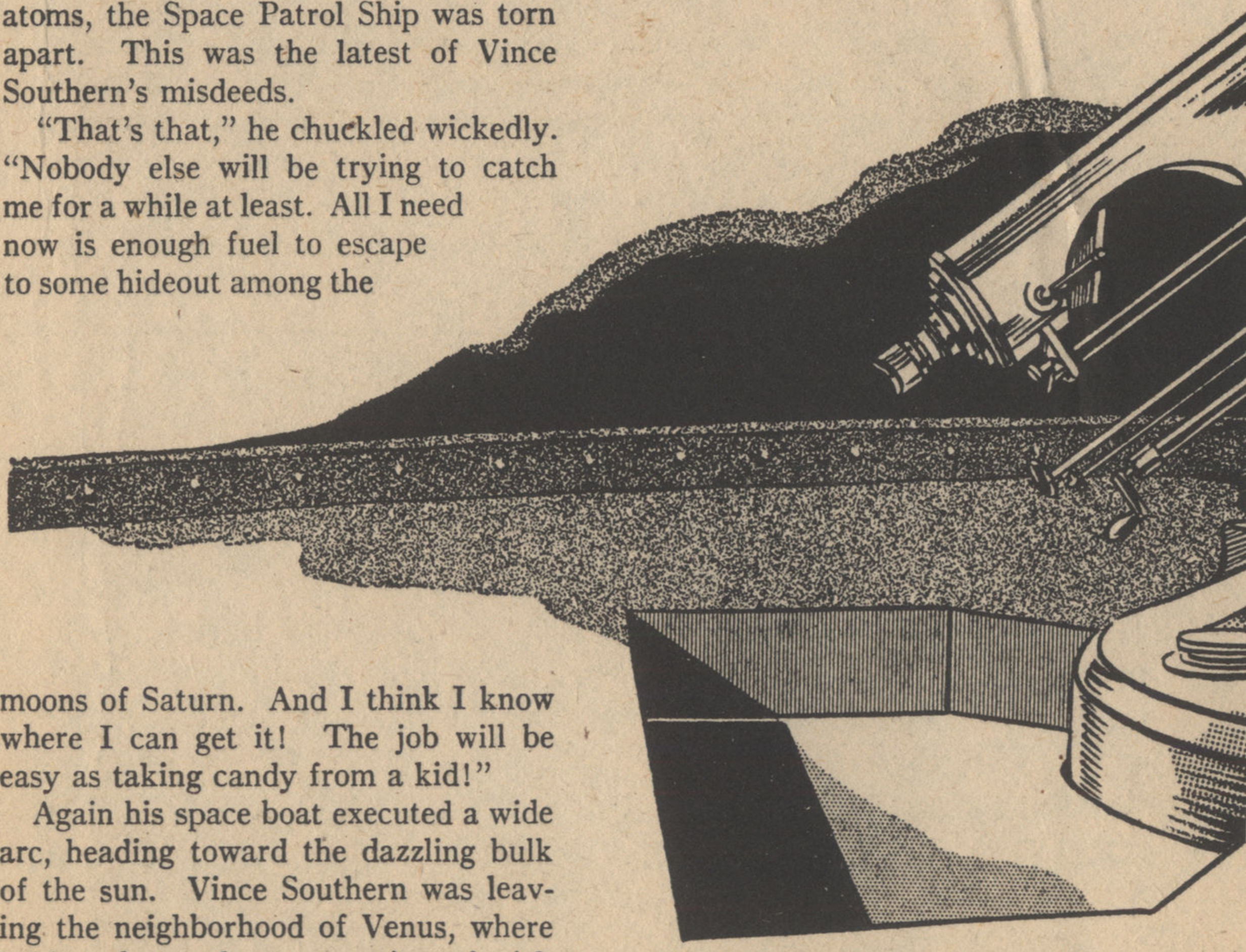
COMING NEXT MONTH

In the April, 1971 *FANTASTIC STORIES* (On sale Jan. 26th) A DOUBLE BLOCKBUSTER—Two short novels, WOLF QUEST by TED WHITE, the long-awaited sequel to Phoenix Prime, and DREAD EMPIRE by JOHN BRUNNER, a new Traveller in Black, plus HOW GEORGES DUCHAMPS DISCOVERED A PLOT TO TAKE OVER THE WORLD by ALEXEI PANSHIN, THE INCONOCLASTS by DENNIS O'NEIL, and THE EIGHT-THIRTY TO NINE SLOT by GEO. ALEC EFFINGER.

The Achilles Heel

by Raymond Z. Gallun

Southern wasn't going to take any chances on getting caught—not he! So he forced the meek little astronomer to walk ahead of him into inferno



VINCE SOUTHERN looped his waspish little space boat around in a wide arc, to get behind the pursuing ship of the Interplanetary Police. He had the advantage of superior maneuverability. Squinting expertly through the sights of his atomic blast weapon, he pressed the lanyard. Flame lanced out dazzlingly in the void.

In a magnificent blaze of exploding atoms, the Space Patrol Ship was torn apart. This was the latest of Vince Southern's misdeeds.

"That's that," he chuckled wickedly. "Nobody else will be trying to catch me for a while at least. All I need now is enough fuel to escape to some hideout among the moons of Saturn. And I think I know where I can get it! The job will be easy as taking candy from a kid!"

Again his space boat executed a wide arc, heading toward the dazzling bulk of the sun. Vince Southern was leaving the neighborhood of Venus, where he'd stolen a huge quantity of rich radioactive salts. Within five hours he was descending toward the eternally sunward face of Mercury, whose almost airless wastes of mountains and plains

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KRUPA

and extinct volcanoes were heated by the terrific solar rays to a temperature that would have melted lead.

Vince Southern had never visited the planet that was nearest to the sun before, but he had maps to go by and navigation pamphlets to guide him to the exact place which he sought. Checking speed with his forward rockets, he slanted down for a landing. Ahead, in the awful glare of the desert, he saw a low building, lost in that lifeless wilderness. It was the building he sought —the small Solar Observatory of Mercury.

"They'll have a supply of rocket fuel here some place," Southern thought. "The observatory also serves as a space-traffic emergency station. And the best part of it is, I'll get the fuel without having any tough customers to worry about. Just some crazy old hermit astronomer. Joshua Briggs is his name, according to the personnel listing in the pamphlets."

Vince Southern's handsome features twisted into a sneer of contempt. He didn't land at once in the clearly marked area beside the building. Instead he guided his craft low over the observatory, sweeping the latter with a wide beam of powerful waves from a paralyzer gun. Anyone inside the structure would be temporarily rendered senseless.

Having completed this safety measure, Southern glided his ship back on its gravity plates, and brought it to rest on the landing stage. Clad in space armor, he emerged from the cabin a moment later. His helmet face-plate of darkened glass protected his eyes from the awful glare of the sun. A few seconds of exposure to the hellish Mercurian conditions forced no damaging heat through his vacuum-insulated space suit.

He ran to the observatory airlock, worked the knobs to open it. He passed through the double doors to the cool, refrigerated interior of the structure, whose metal walls were heavily shielded against heat by vacuum compartments. Here, Southern explored for several minutes.

HE found the man whom he judged to be Joshua Briggs, the lone attendant of the observatory, lying unconscious beside a worktable littered with solar spectographs. The scientist was a wispy little man with a peculiar mottled scar on his cheek.

Ruthlessly Southern started shaking Briggs, to bring him to his senses. The stunning effects of the paralyzer gun, which disorganized the functions of brain and nervous centers, was always brief. Presently the little man opened his eyes.

Vince Southern had removed his own oxygen helmet, for there was plenty of cool, conditioned air here to breathe. He looked down at his captive with a good-natured but sinister smile.

"I guess maybe you know who I am, Grandpa," he boasted. "I guess maybe you've seen plenty of my pictures, scattered around by my good friends, the police. You know I'm a tough guy, don't you? I suppose you realize that there's nothing for you to do but obey my orders, huh?"

Southern twisted the astronomer's wrist torturingly, just to emphasize his question.

The little scientist winced with pain, but there was a strange, detached dignity in his gaze, as he studied the renegade's thin, sharp-cut features and reddish, wavy hair that streamed with careless charm down over one side of his forehead.

"Yes, I recognize you," Joshua Briggs said at last, speaking quietly from the prone position in which the outlaw held

him. "You're Vincent Southern, wanted for a dozen crimes, including wholesale murder, on Venus, Earth and Mars."

"Right!" Southern snapped, glorying in his exploits. "But don't ever try to high-hat me, Grandpa! Treat me with respect. Do you understand?" The outlaw jerked the astronomer's arm viciously, just to show that he meant what he said.

For a second something vengeful and steely showed in Joshua Briggs' eyes. But pain made his lips go white. Almost losing consciousness again, he wilted, panting.

"That's better," Southern sneered. "I came here to get rocket fuel, so I can make a real getaway to Saturn's moons. I'm going to leave the Space Patrol ships so far behind that they'll think they're chasing a devil's phantom. Now, where is the emergency fuel supply kept, Grandpa?"

Briggs seemed to hesitate. But after a moment he must have recognized his helplessness.

"It isn't stored here at the observatory itself," he said at last. "Rocket fuel, being atomically unstable, gives off certain radioactive radiations. The instruments I use here, to test and measure the magnetic emanations of the sun, are very sensitive. It wouldn't do to have their readings influenced by other radiations. So the rocket fuel is kept in an insulated underground vault, about two miles from here."

Vince Southern knew enough about science to realize that the astronomer probably stated facts. But the outlaw had long ago learned caution, too.

"Okay, Grandpa," he said. "But now listen carefully, and don't tell me any stories. Could I land my space boat any nearer to the vault than this, so that it would be easier to load the fuel? I've been told that there's a lot of fine ash from ancient volcanoes on Mercury—swell stuff for a space ship to sink out of sight in—if somebody happened to land it in the wrong place."

AGAIN Joshua Briggs hesitated, as Vince Southern studied him keenly. "No—you couldn't land near the vault," the scientist finally replied, forced once more to tell the truth.

Southern nodded easily. "Yeah, I thought so, Grandpa," he said. "You would have liked to lie, and maybe trick me into getting my space boat bogged down in a lot of that ash! But you knew better than to lie to me. You knew I'd guess that the fuel would be kept in the most protected place possible to avoid having folks like me take it away from you. But—how do you bring the fuel drums back here to the landing stage?"

Joshua Briggs' withered face worked. "I—I'll show you," he stammered. "If you'll let me up—"

Southern released his prisoner, but kept him covered with a small atomic blast pistol. The old astronomer rose to his feet, and walking with a peculiar rolling gait led the way to a window, fitted with double panes of darkened glass, with a vacuum in between.

Briggs pointed beyond the window, without saying anything further.

Southern peered out across the heat-blasted plain—a skeletal waste of ash and scoria ejected from volcanoes that had been extinct for millions of years. Above the plain, in a dark, almost airless sky, blazed that monster sun of Mercury.

But it was not any of these things that Briggs meant to draw Southern's attention to. The astronomer was pointing at a path, which wound its lonely way out across that inconceivable desert of superheated ash and rock. The path was made up of countless

foot tracks—the marks of space boots.

Seeing those tracks, Southern frowned in puzzlement.

"Oh," he growled after a moment. "I get it. You carry the fuel drums yourself—on foot—whenever it's necessary. You go out in a space suit."

Briggs nodded.

"Then," the renegade observed guardedly, "I could send you out to bring the drums back here to my space boat, eh, Uncle Dudley?"

"You might," Briggs responded.

Southern chuckled deep in his throat. "I couldn't do anything more stupid than that, could I, Grandpa?" he questioned. "I wouldn't want to leave you all alone and unguarded. You'd probably think up some kind of dirty trick to spring on me. So I guess maybe I'll have to go along with you, just to be sure you don't get any ideas!"

Vince Southern paused, thinking warily, wondering if this little old astronomer was trying to lead him into a trap of some kind.

"Listen!" he said at last, angrily. "You know it's death to lie to me, Uncle Dudley! I know things about space suits, and that they can screen an awful lot of heat away from a man's body. But I've always heard that, even so, it's dangerous to wander around on the sunward side of Mercury—if a fellow happens to wander too far. Let me see that space armor you use!"

Joshua Briggs obeyed promptly, opening a supply cabinet in the wall. Southern took out the vacuum armor hanging there beside several curious umbrella-like sunshades of asbestos fabric. He examined the armor carefully, especially the heavy, insulated boots. It was all standard equipment, exactly like his own space suit.

SOUTHERN gave his captive one final. searching look. But the evidence was plain and convincing. First, there were those tracks out there in the desert, proving that Joshua Briggs often ventured out there into that eternal, blasting sunshine. Second, his own standard make of armor. With a sunshade added to his own gear, to screen off the direct solar rays, Southern would be equipped just as was the astronomer.

"All right," said the outlaw. "Get into your rig, Uncle Dudley, and we'll get that space fuel. With an equal chance, I guess I'm tough enough to go anywhere you can go—even if you do know a lot more about Mercury than I do! But remember—I'll keep right behind you with my blaster, and if you try the least little thing that looks funny, it's your finish!"

Presently, scientist and outlaw were plodding across the desert toward the fuel vault two miles away. In addition to their asbestos sunshades, they carried slings of metal webwork at their belts, with which to transport the small drums of compact but fearfully powerful atomic fuel, which they were going to bring back for Southern's space ship.

Vince Southern kept his captive, who led the way, covered with his blaster. To the renegade, the going didn't seem at all difficult. True, his boots sank deep into the superheated ash of the path at almost every step; but two miles wasn't a great distance, and he didn't mind a little exertion. Carefully he dogged every step old Joshua Briggs took, keeping close to him. That way there seemed no chance for error.

Vince Southern felt cool and comfortable in his space suit, shaded as it was by the asbestos shield he held over his helmet. This much was all logical and in accord with science. The direct rays of the sun were screened away from him, and the Mercurian air, being extremely thin, could not transmit much heat to his armor.

It wasn't till they were a good mile from the observatory that an unpleasant warmth began to seep at last through Southern's insulated boots. Even then he wasn't worried much, however. His captive was still plugging on, the same as ever, just ahead. Evidently a fellow just had to be rugged. . . .

Southern thought optimistically of the future. As soon as he got the fuel, he'd be flying out there toward the moons of Saturn. Wanted men who had enough wealth could live in luxury in certain prepared underground caverns in the little-known Saturnian satellites. They could have their features so changed by plastic surgery that they could come back to civilization, and remain forever unrecognized. Southern had wealth enough, what with all those cannisters of rich radioactive salts he'd stolen on Venus, loaded in his space boat.

He even smiled sardonically at the thought of killing Joshua Briggs when the old man ceased to be useful to him. Maybe Briggs thought he was going to be spared. Well, let him keep his illusions! Southern always had believed in playing safe, and dead men told no tales, particularly dead men whose corpses were dissolved to powder by an atomic blaster!

But now the outlaw's sadistic reveries were broken off by real alarm. That heat in his boots was increasing with every step! Scorching pain in his feet grew rapidly—becoming real torture! A dizziness of agony swirled in his brain.

IN dumb, uncomprehending confusion he stared at Joshua Briggs' back, just ahead. The aged astronomer was still plodding on unruffled, betraying not the slightest hint of discomfort. How could this be when they had identically the same kind of space armor and sunshades—the same identical protection? Southern had been careful; the old fool could never have played a trick on *him!* There was no way for him to do so!

But there must be a trick—there had to be—even though he couldn't possibly guess what it was! Those foot tracks in the path, showing that Briggs had come this way hundreds of times before, just as he was doing now, were certainly bona fide. And yet the first time he, Vince Southern, who was as tough as anybody, tried it, he was tortured to the verge of fainting. In a minute he'd collapse in that hot dust, helpless!

Filled with hate and lust for vengeance, Southern began to squeeze the trigger of his blast pistol. But terror conquered his urge to kill Joshua Briggs. He'd be left alone then, to die slowly, hideously!

For he could grasp the facts now, relative to his own position. Space suits were a very effective protection against heat; but they had a weak spot—an Achilles heel. Shaded from the direct rays of the sun here, they could scarcely be penetrated by the weaker, reflected heat waves of the surrounding desert. But when any *part* of them—the boots, for instance—came into actual contact with something hot enough, heat conduction started working, slowly penetrating insulation.

Southern's space boots were in contact with the sun-blasted ash of Mercury, heated to a temperature that would have fused many of the less refractory metals.

That was why Vince Southern's feet seemed afire. He could understand why it was so now. What he could not understand was the thing he had banked his judgment on, before he had ventured out here on this path of space-boot tracks.

Those tracks had proved that Joshua

Briggs was immune to the danger, and Southern had expected the same immunity for himself. Joshua Briggs' immunity was completely evident now, as he continued to plod on, unruffled and undisturbed, toward the low ridge of rocks, still almost a mile ahead, beneath which the fuel vault was located.

But what was the secret of the astronomer's freedom from doom here? Southern could not think of the ghost of an answer.

Agony increased second by second. Southern's mind was getting dim. Blood seemed to hiss and roar in his head. He staggered, trying to balance his weight on one foot and then the other, as he executed a grotesque torture dance. All around, the devilish glaring wastes of Mercury seemed to wait inscrutably for their prey.

Vince Southern raised his blast pistol again toward Joshua Briggs. But the effort at revenge was lost in the half-crazed confusion and terror of his thoughts. Instead of squeezing the trigger, he lunged furiously at the little astronomer.

Briggs, who must have long anticipated some such move, dodged aside easily. He faced the renegade and his menacing weapon.

"Damn you!" Southern roared into his helmet radiophones. "What have you done to me, you devil? What have you led me into? You're going to die for this doublecross, Briggs . . ."

SOUTHERN'S voice was a whining shriek at the end. He could smell his own flesh burning now. It was horrible, horrible.

But Briggs remained calm. His features were faintly outlined behind the dark glass of his face-plate. Maybe his steadiness made him seem a little like a superman—a creature who was no longer quite human after having spent so much time in the hot furnace of Mercury's sunward hemisphere.

"No, Southern," he said, speaking through his phones. "You won't kill me now. You see, I'm the only person who can save you from slowly roasting alive. Without me, you couldn't take ten more steps. You've destroyed many lives, Southern. You're a condemned man. But the euthanasia chamber provides an easy death. Now will you hand over your blaster?"

Tremblingly, and without another word, Vince Southern obeyed. Yes, the euthanasia chamber seemed a boon now—a relief from hellish torture. He was barely conscious as Briggs tied his wrists behind his back with a metal cord taken from his own equipment, and began to carry him back toward the observatory.

In the building's cool interior, Southern submitted to first-aid measures. His feet were masses of ugly, charred blisters. But Briggs, who had tied the outlaw securely to a refrigeration pipe, doctored the injuries expertly.

Vince Southern was the first to speak.

"How did you do it, Grandpa?" he asked dazedly. "How come you didn't get the same hot-foot I did? I can't understand it. What's the password?"

Joshua Briggs smiled apologetically at the confused and truculent badman.

"Password?" he repeated. "Well, I got acclimated to Mercury. A long time ago I spent an hour out there on the desert. I didn't know any better then. I walked too far, and the heat soaked through my boots. I couldn't walk back; but I managed to stay alive by leaning against some rocks, and by keeping in the shade as much as possible.

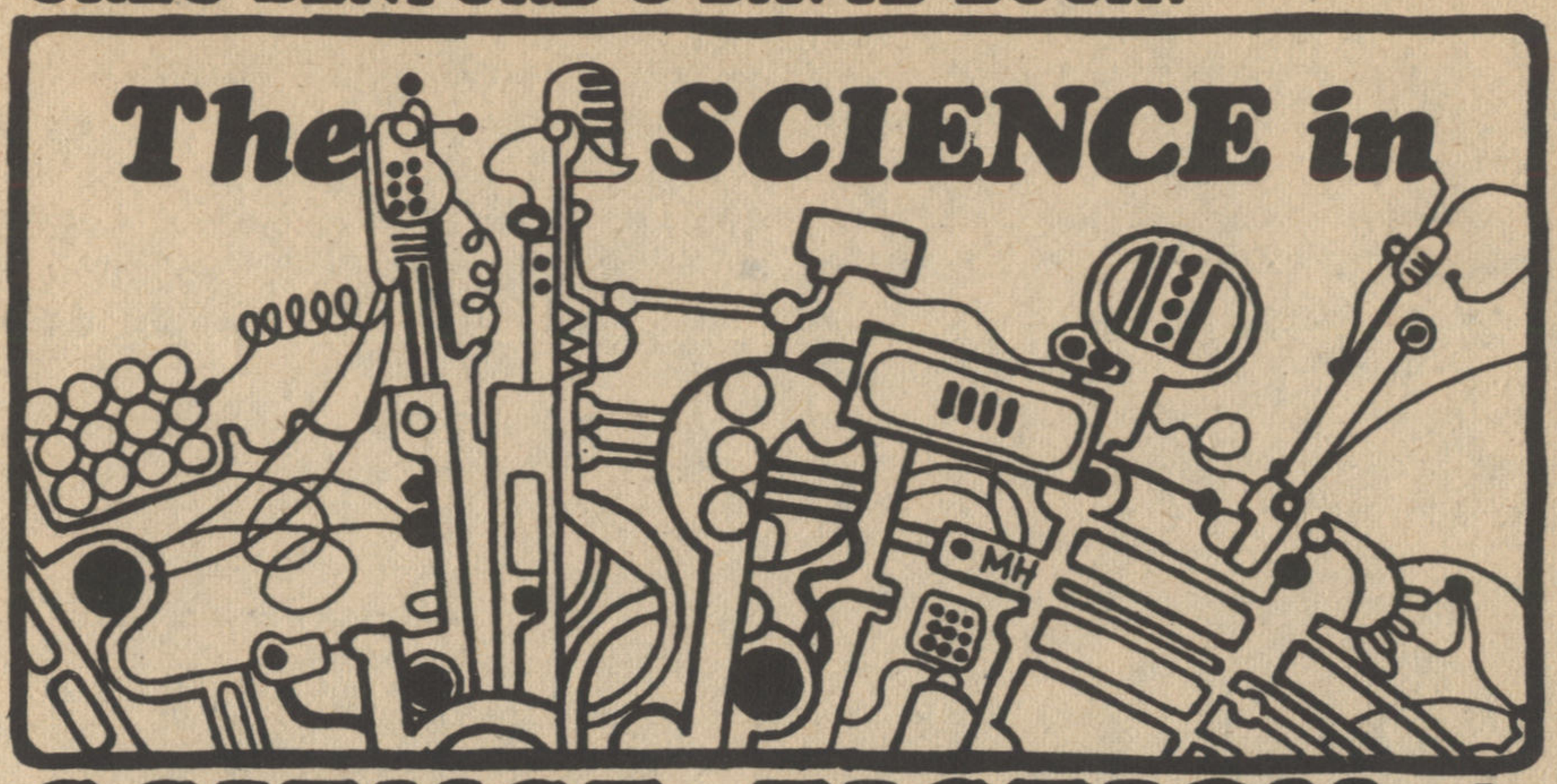
"Bixby, my boss then, picked me up in a small space boat. I spent a long time in the hospital."

Briggs had gotten out of his space

(CONTINUED ON PAGE 103)

GREG BENFORD & DAVID BOOK:

The SCIENCE in SCIENCE FICTION *



THE ULTIMATE CITY

Losangelesization is going to get you. That is the inescapable conclusion of the onrush of modern society. Machines, concrete and *anomie* grow apace and there seems to be little man can do to stop them.

In fact, he doesn't *want* to stop them. Man is wedded to the city. He began with villages and rude huts, perhaps ten thousand years ago with the invention of agriculture. The motivation then was utility in tending the crops, better distribution and simple self-defense against the roving tribes of hunters.

From villages came town and from towns came cities. Cities are now giving birth to "urban complexes" and it looks as if there will be no end at all to their spread. Someday a major portion of our planet will probably be covered with a jumbled sprawl of man's nesting places.

This isn't a pretty picture, especially since it is getting brutally clear that ecological instability will step in fairly soon, too. The fewer the different species of plants and animals, the easier it gets for something to go wrong in the balance of nature. And a city-wide planet is unlivable; there is no place to grow food or make oxygen.

Even without smog the Los Angeles of the future will be pretty forbidding. Man seems driven into cities by his quest of community and variety, against all his natural instincts that favor open land and free skies. People prefer spots that are at the boundary of natural areas—on the edge of a forest, the foot of a mountain or the shore of a body of water. This isn't surprising, because such a place afforded our primate ancestors many places to hide or escape to, and made a lookout's job easier—no need to look in all directions at once.

The surprising thing is that people violate this preference by moving into crowded cities, where everyone must live in his neighbor's hip pocket. Cities are magnetic; they run counter to some of our basic drives. We pay a high price for the convenience of going to movies around the block.

We have two inheritances, a biological and a cultural, and we are at the mercy of both. When they conflict, the result is widespread discontent. Even though it often appears that we have only to act more sensibly to right our ills, we don't know how to live any other way. So population continues to explode, cities grow and the complexity of the social order grows alongside them.

For a science fiction writer this poses a problem: how far can it go? Coupled with humanity's expanding population and insatiable appetite for energy in all its forms, how far can the urge to merge in cities take us?

The answer, given a fairly expansible imagination, is from here to the other side of the sun. Here's the proof.

The only limits to the size of man-made structures are the amounts of building material and energy available. Any substance is suitable as a building material. All our power comes from the sun.

Each of the above statements seems to have obvious exceptions. But the exceptions dwindle in significance as man broadens his horizons.

Take the first one. It's impossible to raise buildings more than five or ten miles high, because even mountains collapse and flow under their own weight if they get any bigger than that. Okay, put the buildings in free orbit about the earth, or better, about the sun. Given man's inexhaustible technical ingenuity, this is only a medium-hard engineering problem.

Or does someone object that water is unsuitable as a building material at temperatures we like, or that helium is completely unsuitable? Granted. But there's only a little water and a tiny bit of helium on Earth's crust. Most of the planet is nickel-iron, with sand, aluminum and other metal oxides dumped on top—all fine construction materials. Take apart the planet, then, and put it back together as a gigantic city if we need more room. It would take a while—but how long depends only on the energy available for the purpose.

As everyone knows, the energy in coal and oil came originally from the sun. Water hoisted by the Sun's rays falls downhill to drive hydroelectric plants. Winds blow because solar heat falls unevenly on the Earth's surface.

Uranium fueled reactors don't need the sun, but our expanding runaway economy will wipe out the uranium reserves in a few centuries. Fusion power from hydrogen will sustain growth for something like ten thousand years at this rate. But probably *something* will come along to stop the insanity. If not, someday there'll be no more hydrogen for fusion power—and no more water either.

But for many purposes, it's more efficient to use solar energy than anything else. Heinlein's Douglas-Martin solar energy collectors ("Let There Be Light") would be a smogless, cheap way of producing power. Unfortunately, real solar cells aren't that good yet. In the long run—over millenia—no power source can grow to meet a steadily increasing demand. The only energy likely to be available indefinitely is solar—and the rate at which the sun emits energy is the ultimate limit on human technology.

How could the solar system be rebuilt to provide more living space and collect as much of the sun's energy as possible? Freeman Dyson, a physicist at Princeton's Institute for Advanced Studies, has considered just this problem. Collectors need mass. The solar system holds a few Jupiter masses, that's all. What can be done with it?

First, break it up. That means

overcoming the gravitational attraction that clumps the mass together, which is no small order. It would take about 800 years of the sun's total energy output to tear Jupiter apart, for instance.

Next, the mass could be made into a spherical shell about eight feet thick, enclosing the sun at twice the earth's distance from it. The inner wall of the shell could be simply radiation collectors, sopping up the sun's output.

The shell will heat up, like a concrete or asphalt pavement on a sunny day. Visible light comes from the sun, gets absorbed, then is reemitted as heat or infrared rays. These heat rays are really another form of radiation with longer wavelength and lower frequency. A really farflung structure built around the sun would turn a sizable fraction of visible light into infrared.

That was the thrust of Dyson's thesis: an old civilization would surround its star and look to us like an intense infrared object. So, he said, use infrared telescopes to scan the skies for such objects. After a search for radio transmissions, that might be the easiest way to detect an alien society. It is the best method of detecting runaway technologies.

A few scans have been made, usually in the pursuit of more routine research. Nothing really exciting has been found, though it would be a mistake to imply that every infrared object in the sky is understood.

Suppose we take a closer look at Dyson's idea. Is a spherical energy collector really the best way to manage things?

Of course, the spherical shell can't be a rigid object. It would be unstable. It's easy to see why, if the shell doesn't rotate; the sun would just pull the shell inward, setting up enormous stresses until it crumpled and fell into the sun.

Making the shell revolve would help, but not enough. Suppose the plane of rotation were the present plane of the ecliptic, so that Earth was allowed to stay in its orbit and the rest of the shell were gradually built up around it. The Earth would still be stable in its orbit. Now it would be one more speck on the surface of the shell, and the shell would revolve about an axis that passed through the sun. But look at the top of the shell, perpendicular to the plane of the ecliptic and directly above the sun. If the shell is rigid, that piece must not rotate at all. It's just like our own north pole; if you stand on the pole, the Earth appears to rotate beneath you. At the top of the shell there is no centrifugal acceleration from rotation to balance out the pull of the sun, so any mass there must fall inward.

A similar lack of balance exists everywhere on the shell, except near Earth, where the centrifugal acceleration is just enough to do the job. So the shell would break up.

What Dyson originally envisioned was a loose collection or swarm of objects traveling in independent orbits around the star. They could be asteroid-size or any other dimension to suit the convenience of the inhabitants. Such a swarm could capture very nearly all the energy the sun radiates.

Energetically, all this can be accomplished. Taking the mass and distributing it into precisely calculated orbits all around the sun requires only a millionth of the energy it would take to break up Jupiter and the other planets into fragments.

The trouble lies in the eventual fate of this swarm. Dyson thought of these orbiting chunks as homes for truly open societies. They would be free of the control of some central authority because of their independent orbits; without some

powerful motivation it is very hard to justify imposing your will on somebody half a solar system away. Historically, local independent "city-states" breed freedom, and Dyson hopes these same conditions would be created in the effort to capture most of the sun's energy. The sun-circling biosphere might even be generated just that way—by men pushing off into new orbits once an older community has become rigid and authoritarian. Starting from orbits near Earth's, gradually a spherical swarm would build up.

This is a pleasant picture, but it wouldn't last. The gravitational attraction of those asteroid-size city-states for each other is very weak, but it is not zero. The shell-cloud arrangement Dyson envisions cannot be stable, in the long run. Two chunks passing moderately close will divert each other very slightly from their courses. In time the deflections will build up.

The situation in many ways resembles the evolution of our solar system. Current thought holds that our system began as an amorphous disk of dust and gas, revolving about the newly-formed sun. The dust gradually accreted. (Incidentally, nobody really knows yet why this dust formed into boulder-sized rocks. It seems that ice may have been the essential ingredient. The dust just froze together. Ice is one of the few materials capable of building up sturdy blocks of conglomerates. Once the objects grew to the size of a few hundred yards on a side, gravity took over and built even larger ones. At least, that's the way current theory runs.)

Calculations show that once chunks a mile or so in radius formed, they should have quickly clumped into planets. Except for the fact that the solar system started out as a disk and Dyson's model is a sphere, the two are similar systems. Given a disk of asteroids in the early solar system, it wouldn't take more than a few thousand years to form planets. A similar rough calculation for Dyson's sphere shows that it would break up in about the same time.

Now, all this could be avoided. Dyson's sphere needn't clump back into protoplanets. The minute zigs and zags of the asteroids could be measured and, using rockets or whatever, corrected. But that would require an elaborate detection system of radar, computers, and—most of all—a central clearing house for all this information.

In the end, such a central authority might be the death of Dyson's city-states. An independent-minded asteroid couldn't forego the services of the authority without endangering both itself and its neighbors. Collective security—familiar words by now, aren't they?—would demand cooperation.

The history of large organizations—empires, if you will—is that in one way or another they fall apart. If authority crumbles and the central computers go out of operation in Dyson's spherical shell, though, the biosphere that men have created around the sun will start to deteriorate. The process will feed on itself, bigger and bigger disasters will befall mankind as asteroids smack together, and it might well be impossible to recreate the central authority soon enough.

Larry Niven avoided this problem in his novel, *Ringworld*, by making Dyson's sphere into a ring. In the far future someone—he doesn't say who—creates a giant wedding-ring a few miles thick and with a radius larger than the distance from the Earth to the Sun. It rotates around a star which lies at the center of the ring. It has a surface area of millions

upon millions of square miles, enough for a thousand human races to live independently. They live on the inner, sunward side, where the sun is never gone from the sky. Their atmosphere is kept in by simple centrifugal force, which presses it against the ring and also provides "gravity." The air doesn't escape because of a range of mountains at both edges of the ring.

The trouble with this model—however much fun it is to play around with, as Niven does for an entire book—is that the ring has to be made of material a million times stronger than any known substance. Otherwise all that centrifugal force would tear it apart.

Keeping within the bounds of known materials, then, Niven's ringworld must remain an interesting fantasy. A further look into the physics of the problem, though, reveals that there aren't any other workable forms of Dyson's model. There is simply *no way at all* to get all the energy out of a star and keep the system stable. So mankind will never be able to use all the sun's energy. We will have to live on much less.

When Dyson published his theory, Poul Anderson wrote a letter to *Science* suggesting that an advanced society would either approach its Malthusian limit too fast to permit the energy resources to be spent on a huge project like cosmic engineering, or else enforced population control would stop the growth of our race below the levels necessary to need the engineering.

We hope the second conjecture is right. After all, when science fiction writers talk about such seemingly abstract and nebulous possibilities as Dyson spheres, they aren't just making up fairy tales. Niven's *Ringworld* is more than fancy imagination; it's the sort of thing human technology is actually pointing towards.

These ultimate cities are metaphors. They tell us that the small voice in the back of our minds is right; that our machines may indeed run mad. And the machines are mad, of course, because *we* are mad. We cannot grow beyond ecology and beyond reason and still live; but we are trying to. We cannot let our cities *right now* overwhelm our planet; but we do nothing to stop it.

Dyson framed his theory in terms of what might happen to some alien culture circling a far star. Fair enough; other beings might do anything. It is even possible that men shall someday build such spheres, as well. But something tells us that here the science fiction writer is right and, at least as far as mankind is concerned, Dyson is wrong. There is in Niven's book, and in the work of others, the persistent undercurrent of feeling that such Gargantuan machinery is fundamentally antihuman, and that it should not prevail.

—Greg Benford
& David Book

(CONTINUED FROM PAGE 98

suit. He pulled up his trousers leg.

"The doctors had to amputate above the ankles," he said simply.

Vince Southern, a captured renegade extraordinary, stared dumbly at a pair of neat artificial limbs, made of asbestos fiber, which not even the searing dust of Mercury could damage.

THE END

In a field as retarded as human science, the emergence of a method to restore conclusively the tremendous power of true sanity is predictably subject to rejection before inspection.

A fast, workable way for an individual to realize his full potential for health, happiness, intelligence and freedom is destined for attack by current mental professions, these still barren of positive results.

Promotion is sinister from today's techincians of the mind . . . mental illness lurks in all men . . .

personality irregularities are widespread . . .

psychic disorders are chronic . . . inescapable . . . incurable.

Increasing numbers of "mentally ill" citizens, with no statistics for improved conditions, lead to the hypothesis that vested interests earn more from people being sick than getting people well.

There is an alternative to the propaganda. The worldwide religion of Scientology and its sub-study Dianetics, maintain that man is basically good, sound of mind, able to master his life with integrity and spiritual assurance.

Scientology and Dianetics have been misrepresented and maligned by self-appointed authorities of human science; the attacks are insignificant in the face of the millions of individuals around the world who have applied the techniques of Scientology and Dianetics, and have experienced demonstrably high, new levels of personal awareness and achievement.

And now, Scientology speaks for itself:

WHAT IS SCIENTOLOGY

by Rev. Robert H. Thomas,

Deputy Guardian for the U.S. Churches of Scientology

Awed by the immensity of the natural order around him, Man has, for aeons, yearned to discover in himself a cosmic origin nearer to his Gods. Can there be some imprisoned divinity in him which survives the sufferings and erosion of Time?

Too little satisfaction has been found in the countless philosophies, therapies, and religions attempting to reverse, or even arrest, the physical and mental decline of a fragile human mortality; framed by the accident of birth, and the cold annihilation of death. Experiences of

pain, loss, and failure inevitably accumulate to gradually quench the joy of living and with it, the Life Force itself.

The full and conclusive discharge of the "stored up death" of the past has been a goal long challenging the imagination of Man. Its accomplishment has seemed sufficiently incredible to limit active pursuit to those few saints and sages whose legacy of insights and efforts brightens, sporadically, the mists of history with the promise of victory over Death.

One man in our own perilous time has, during a personal Odyssey spanning almost half a century, finally isolated the long hidden causes of lost vitality and human aberration. In doing so, he has also made available a workable method to restore, correct, and advance human life potential. That man is L. Ron Hubbard, writer, explorer, engineer, and Founder of Dianetics and Scientology. The answers that he obtained in this remarkable venture inward, answers which restored his own health fully, were first released to the public in a best selling book, DIANETICS, THE MODERN SCIENCE OF MENTAL HEALTH, published in 1950. In this book is foreshadowed the methodological key which not only restores life potential to an individual, but can produce in Man states of ability and expanded consciousness, which effectively advance him from the state of homo sapiens to the echelon of homo novis (new man).

MECHANISMS OF THE MIND:

Man's conscious mind is a storehouse of accurate, finely differentiated data obtained in the process of living. Problems relating to his survival are posed and solved perfectly when based on the accurate and readily-available data of conscious experience. In Dianetics ("through-mind") the fully aware part of the mind that records, recalls and evaluates data is called the ANALYTICAL MIND. This mind is analogous to a computer, providing swift, accurate solutions to the problems posed by life, modified only the the "in-put" of education and experience. The memory "banks" of man are the complete moment to moment mental recordings of all perceptions of his existence. These recorded moments are stored with full perceptics as Mental Image Pictures. Pictures made during times when the individual is analytically aware (fully conscious and perceptive) are filed and available as data in the Analytical Mind. BUT . . .

There is another mind existing hidden and previously unsuspected; a mid-evolutionary mental state in man; a carry-over from the lower organism response level. During moments when one's survival is severely threatened (those containing pain and unconsciousness), the individual continues to record sensations and perceptions in literal detail, but files them in a separate, survival priority, "memory bin," called the REACTIVE MIND.

This primitive survival mechanism like a vestigial animal mind "thinks" only in identities; one painful datum equated with others to form reaction patterns that are automatically superimposed over reason during moments of stress, on a purely STIMULUS-RESPONSE basis.

What would happen if a computer operated with a hidden input of data irrelevant to the current problem it is solving, and *unknown to the operator*? Such is the effect of the Reactive Mind on Man, with the resulting "wrong answers" just as devasting to human sanity and well-being.

The Mental Image Pictures of such indidents of pain and unconsciousness, neither analyzed nor integrated with conscious experience, are called ENGRAMS. The total memory content of the Engram is equated with the pain and threat-to-survival theme in a primitive computation like: "I survived; therefore, I survived *because* of these words/pain/feelings." This identification causes the compulsive *repetition* of the past engramic behavior and sensations when *later* activated by a similar experience.

To use again the computer analogue, when the Analytical Mind is involuntarily "fused out" by the "overload" of severe stress, the Reactive Mind—functionally not unlike a shock absorber—directs emergency control of the organism and records the experience for future feed-back to program behavior automatically in the same "safe" pattern. ("Safe" because the organism survived, using them.)

In Dianetics, the Freudian concept of the Unconscious Mind is thus fully clarified and advanced by the startling discovery that the "unconscious" (Reactive) mind is the only mind which is *always conscious* and recording.

The reactive mind has apparent usefulness to man in emergency circumstances. It alerts him to pull his hand off a hot stove immediately, by automatically and instantaneously reminding him of an earlier similar painful experience. Unfortunately, however, the Reactive Mind does not calculate the appropriateness of circumstances under which it imposes past survival behavior. The more conditions in the present resemble the content of an engram, the more the Reactive Mind forces the individual into ancient and out-of-context behavior patterns contained in the engram.

The conflicts, anxieties of spirit, psychosomatic illness, and anti-social conduct resulting from this rugged but antiquated survival mechanism have heretofore been mistakenly attributed to an unconscious biological "death instinct" because, until Dianetics, the precise nature and real *contra*-survival force of the Reactive Mind was unknown.

THE REACTIVE MIND

How the Analytical/Reactive Mind relationship works is well-demonstrated by Hypnosis, which by restimulating past unconsciousness, suppresses the conscious mind and achieves a perfect engram (minus, of course, physical pain). Suggestion under hypnosis can interfere not merely with the subject's voluntary movements and body functions, but also the involuntary functions of the autonomic nervous system, which controls, among other things, breathing and heart beat. Suggestion can influence acid secretion in the stomach, changes of sugar level in the blood, etc., and can remain effective even after the subject has emerged from his hypnotic trance. For example, if a subject were given a post-hypnotic suggestion that, after being awakened, when the hypnotist spoke his name, he would feel a sharp pain in one foot and hop around the room on the other, he would do so, always inventing ingenious rationslizations to explain his behavior. The control imposed by the Reactive Mind is much more powerful than the hypnotist's suggestion, as its commands are enforced by the *painful* content of the engram threatening one's basic survival. Conclusion: What hypnosis can do, the Reactive Mind does better (or worse!).

The animal mentality, largely reactive,

provides a basic illustration of engramic influence. Take, say, a deer attacked by a panther leaping from a large boulder, who although injured, narrowly escapes. The terror and pain of the attack causes the meager analytical faculties of the deer to become attenuated—more and more unconscious—to the point where the reactive aspect assumes full command. The mental image picture (memory) of the experience is recorded and filed away for future "survival" use.

Thereafter, every time the deer approaches that location in the forest, the incident of the survival threat is activated and reimpinged on the mind of the deer, causing it to shy away on pain of death; to the reactive mind of the deer, PAIN - BOULDER - PANTHER - FLEE - SURVIVAL.

Similarly, in a drugged state—under anesthesia during an operation, or unconscious in injury or illness—the individual has his reactive mind in full operation, only the effects are dramatically complicated by the existence, at the human level, of language.

Such an individual may not be aware of what was taking place, but as he will later discover dramatically in Dianetic Pastoral Counselling, everything which happened to him in the original engram was fully and completely recorded. There is pain, associated with the words and phrases which were recorded simultaneously. This information was unappraised by his conscious mind, neither evaluated nor reasoned, and later, during slight tiredness or depression became RE-STIMULATED by similar circumstances observed by the then-conscious individual. When any such recording (engram) becomes reactivated, it has immense power. The Reactive Mind shuts down the conscious mind to a greater or lesser degree, taking over the motor controls of the body, and causing an involuntary re-enactment in accordance with the meanings of the original word content of the engram, putting this data into operation in an effort to "save" the organism.

The only sign that the individual has that this is happening is the occasional realization that he is not acting rationally, and "Can't understand why I do that." Not only is irrational behavior the result of such replaying of painful moments, but feelings and sensations (physiological reactions in the past incident unconsciously re-experienced) can produce present psychosomatic tensions and reactions in the person.

An example of an engram and its effects might be: Mr. A having a tonsillectomy under anesthetic. During the operation, the surgeon, who wears glasses, comments angrily to a clumsy nurse, "You don't know what you are doing." Mr. A recovers. A few months later, Mr. A, a bit tired during a hard day at the office, has an argument with his boss (wearing glasses), who says, "You don't know what you are doing." Mr. A suddenly feels dizzy, stupid, and gets a pain in his throat. There is installed a kind of "conditioned semantic reflex!"

Another example: an automobile accident. Miss B is knocked unconscious when her car overturns. Her companion in the car screams in the meanwhile, "I'm trapped." I'm trapped! I'll die if I don't get out of here." An ambulance siren sounds in the distance; murmur of crowds, police whistle. A year later, Miss D is driving her car, feeling a bit drowsy, pulls up to a traffic light at a busy thoroughfare. There is by chance the sound of a siren and the murmur of a crowd. She suddenly feels trapped, accompanied by the irrational urge to get

out of her car. Thereafter, she feels very nervous in confined places.

PSYCHOSOMATIC ILLNESS

The Reactive Mind can bypass the Analytical Mind and monitor the actual physical condition of the body at the unreasoning dictates of the words and feelings in the engram, just as a hypnotic subject will obey on cue a command given by the hypnotist after being wakened from the trance.

This demonstrates the Reactive mechanism, which is more serious in the Engram because the commands are pain-associated and have therefore greater command force.

Psycho-physical tensions imposed by the engrams contained in the Reactive Mind can produce the 70% of "physical" illness which, according to many recent studies done, are actually caused by "emotional tension."

Just as a blister can be raised, or salivation or pulse rate influenced by hypnotic suggestion alone, so the stored pain and command phrases in past upsets and injuries, acting like hidden hypnotic commands, can cause the misery of sinusitis, discomfort or poor eyesight, the diffused aches of rheumatism, the agony of neuralgia, the pain and disability of ulcers, continued colds, migraine, and countless other psychosomatic illnesses. All these have variable manifestations but all stem from the same basic cause; old and forgotten incidents containing pain and language command value. Like an electrical condenser, this potentially harmful significance and energy is stored in the sub-levels of the Reactive Mind and when activated, is discharged against the Analytical Mind, causing the eternal recurrence of war, illness, aberration, and human misery in all its tragic multiplicity.

DIANETIC PASTORAL COUNSELLING

Dianetic Pastoral Conselling, as applied by a trained Practitioner, has as its goal the permanent erasure of the psychosomatic and aberrative effects of the painful experiences of a lifetime. The individual is allowed to re-experience the hidden moment of the painful occurrence, and by special techniques recall, in toto while yet fully conscious, the engramic perceptions, words, and sensations which were not previously available to the Analytical Mind. These now become dramatically available and are thus opened to realistic interpretation and evaluation, with resultant behavioral improvement. They are no longer erroneously interpreted by the individual's Reactive Mind as threats to survival in present time and therefore lose permanently the power to dictate irrational "survival behavior."

Thus, the individual, through counselling, differentiates the present from the past. By the repeated recounting of such past painful experience (engrams), the tensional content is discharged from it and it erases!

It is wonderful to see the influence on the human spirit of the erasure of past pain. Such a person becomes radiantly and spiritually alive, free from the negative behavioral conditioning of the past, free also from tensions resulting in psychosomatic disorders!

By using standard Pastoral Counselling techniques, each unwanted feeling or pain is traced directly to its own specific engram. These have been discovered to be linked together in a time-series according to type of sensation, like beads on a string. When the underlying basic engram (the first bead on the string) is found, and discharged fully, the whole

chain erases! Unless the primary engram is erased, its psycho-physical symptoms can re-occur. This explains the basic error of the psychoanalyst attempting to unearth the patient's "childhood trauma" without a full knowledge of the existence or mechanism of the Reactive Mind. In such case, the actual source of the problem remains encysted in the recesses of the Reactive Mind. Dianetic research has established that such basic incidents are often as early as birth and before! (The Church has sponsored free seminars to acquaint the healing professions with these vital discoveries.)

Dianetic Pastoral Counselling has a very definite link to its parent religious study: Scientology, researched by L. Ron Hubbard since the early 1930's. Dianetics was the first public statement of a portion of this broad Spiritual Research Program, concerning the Human Mind, Spirit, and Life Sources.

In the wider scientological context of pastoral counselling, the Mind is considered to be merely an instrument of the Spirit, and what psychosomatic effects the Mind, via its reactive components, may have upon the body are derived from and energized by the Spirit. Dianetics, in fact, does not heal or cure but does guide, direct, and motivate the individual to heal himself spiritually.

When an individual has obtained the practical goal of Dianetic Pastoral Counselling, namely basic physical well-being and a cheerful attitude toward living, he is then invited to proceed to the study of Scientology, which addresses the Spirit more directly and has increased spiritual freedom, awareness, and ability as its goals.

In the broadest view, Scientology (scio: know, logos: thought) is a pan-denominational applied religious philosophy which contains a remarkable system of effective techniques for increasing human ability and awareness. When Dianetics Pastoral Counselling brings the aberrated person plagued by uncertain health to the state of a healthy, relatively-capable human being, Scientology then attempts the full restoration of his innate para-human potential as a Spiritual Being.

The PERSON in Scientology is (and discovers himself to be) a BEING (spiritual agent) of infinite creative potential who acts in, but is not part of, the physical universe. As a source of Life Energy, the Being, controls energy but is not energy, determines wavelength, but has itself no wavelength. It uses matter and mass but is not located "in" space. It observes and records time but it is not ultimately subject to deteriorization of its beingness through time.

Philosophically, all physical phenomena may be considered as matter and energy located (by the Being) in space and time. All "things" are physical except Life itself.

A physical organism is a portion of the physical universe which is animated, organized, and controlled by the Life Force knowingly or unknowingly generated by the spiritual being who inhabits it. The BRAIN, for example, is an organic physical entity. It is not the Mind. The MIND is the intermediate vehicle or tool by which each individual source of Life, (Being, Person) controls its particular organism and environment, much as an operator controls and uses a telephone switchboard. In Scientology Processing each individual pragmatically establishes for himself that the Mind is not the Being but merely a communications network and sorehouse for mental image pictures. (The Analytical and Reactive Minds are earlier discussed.) These pictures are apparently

not part of the Brain nor are they dependent upon the physical organism for their production and storage.

On discovers that failure to control memory of the past accounts for much of his difficulties, as explained earlier. The rehabilitiation of the control of his mental pictures is followed by the revival of the potential for total creative power, knowledge, and action, through Scientology Processing.

SCIENTOLOGY PROCESSING:

Processing is the Scientology Pastoral Counselling procedure by which an individual is helped, in stages, to recover his complete self-determinism and ability. It is done during a precise period of time in which an AUDITOR (literally, one who listens; a trained Scientology practitioner) utilizes carefully devised questions and drills ("Skillful means") which enable the person to discover and thereby remove his self-imposed spiritual limitations. Hypnosis, drugs, duress, or any brutalizing, suggestive, or evaluative methods are not part of processing, since these reduce, rather than increase, the individual's own power of choice. "The processing is monitored by a spaceage Confessional aid, a sensitive electronic instrument designed to reflect, mirror-like, the Spirit's hidden tensional wounds and encumbrances. For the first time, on an objective basis! This increases tremendously the speed of personal revelation and gain, in that it reduces to a minimum the irrelevant berbalizing which often obscures and mars progress in secular psychotherapy.)

SELF-DETERMINISM is that state or degree of personal creative causation wherein the individual can control or be controlled by his environment according to his own free choice. True SANITY can be considered self-determinism rated in degrees on a scale which goes all the way from zero (death) up to levels of spiritual power and causation (achieved through advanced processing) higher than man ever reached. In Scientology, it has been discovered that an individual reduces his self-determinism and ability only by his own decision made regarding some injury or loss he has either received, or caused another. If he decides that something has overwhelmed him, he then tends to accept the influence of that thing habitually, and so becomes other-determined (unfree).

His activities are thereafter uncausative and irrational, and he seems to go wherever the environment (other-determinism) pushes him. He has to that degree become part and pawn of the physical universe. A man is as spiritually unable as he as made hidden ability-reducing decisions in his past, and is as able and aware as he is free from these decisions.

The term CLEAR has risen from the analogy between the mind and the computing machine, used earlier in the discussion of Dianetics. Before a computer can be used to solve a problem it must be cleared of all previous solutions and data. Otherwise, it will unconsciously add the old solution into the new one and produce irrational behavior and inability. Processing "clears" more and more of these hidden decisions from the functioning mind, thereby freeing and rehabilitating the spirit, which is no longer bound by these impediments. This process goes on in stages, much like climbing a flight of stairs, with each stage called a grade of release. A RELEASE is one who has achieved, through processing, an increased ability to change his ideas and the conditions of his life toward greater self-determinism and ability. The degree of this ability

determines how advanced a grade of release has been attained. When no part of the mind remains which is not under the individual's own control and direction, the state of CLEAR has been achieved—a state of Being higher than any formerly envisioned by man, but only a rung in the ladder of self-regulated evolutionary growth envisioned for Mankind through Scientology.

The immediate and practical benefits which come from Scientology can be detailed in many ways, as they affect the different purposes, professions, or enterprises in which people are daily engaged. But all of them can be summed up in this way: no matter what your occupation, interest, or "thing" is, you can do it better! For example:

A student in this age of crisis could avoid the sterile pattern of revolution if he had a hope that a real internal change for man was possible.

A creative writer or composer or artist of any kind would give much to wipe away the blocks and emotional confusions which may often fill his mind when he tries to work.

What statesman could not govern better with a personal and therefore, real, understanding of the reactive forces which grip Man collectively as well as individually?

An office manager would be more valuable to his company if he could coordinate the efforts of his subordinates without causing friction.

Any salesman would value an ability to meet all customers on their own level of communication, establishing immediate rapport.

A parent would feel greater satisfaction if his or her family relationships were smoother and warmer, and if they were more able to counsel family members without antagonizing them or upsetting themselves.

A white-collar worker might gain promotion more rapidly if the endless routine of the office seldom or never frayed his nerves.

A lawyer would be enthusiastic to find that statutes and cases he has encountered throughout a long practice were more at his beck and call each day, instead of slipping away into forgetfulness.

Any man who is doing pporly at his job or profession would find new hope if he could reduce impediments that hold him back and increase the things that give him earning power.

With Scientology processing and training, the accomplishment of all of the above-mentioned capabilities is a proven fact, demonstrated again and again with hundreds of thousands of people all over the world.

SCIENTOLOGY TRAINING

The application of education to life is rarely considered in most formal school systems. By "application of an education" is not meant that that high school, college, or graduate degrees automatically provide increasingly remunerative employment opportunities. Instead, it is a question of closing the gap between the ideas available through study and the realitities of day-to-day living in the physical universe.

The notable exception to purely subjective learning is in technological fields. Data is aligned with use, and the student of a technology can at least find tools with which to shape the environment.

The notable exception to purely subjective learning is in technological fields. Data is aligned with use, and the student of a technology can at least find tools with which to shape the

environment.

The optimum learning situation, as set forth by L. Ron Hubbard, would be a balance of the significance, mass and doingness of a subject. The "significance" of a subject is the principles on which it is based—the thought behind it. (In the study of painting, for example, the history of color theory, or the evolution of abstract expressionism). "Mass" is the material objects involved. (Paints, brushes, and solvents, etc., to continue the analogy.) "Doingness" is application—how the thoughts and objects are combined by the student to produce desired effects. (Painting a painting.)

Scientology academies are all run with a balance of significance, mass, and doingness. As it is only the individual student himself who determines whether or not he will master a subject, there are no "teachers" in the ordinary sense of the word in Scientology. Each class has a supervisor, who is versed in the technology not only of instruction but of learning. His purpose is to have each student progress as fast as his individual capacities allow, making sure subject theories are understood, the mass has been confronted and each student can apply what he has learned to achieve the desired result.

Course Supervisors do not provide "answers." They acknowledge a studen't understanding: they refer the student to the source material which covers the area he is having difficulty with, "reminding" the student of what he already knows.

A dictionary is essential to a Scientology Academy. Hubbard has found the basic reason for student failure to grasp a subject, eventual antipathy toward that subject, and perhaps all study. Words have been misunderstood by the student, either in this or prior study of similar subjects.

Instructors assist students to locate their misunderstood words, thereby greatly increasing their rate and capacity of comprehension.

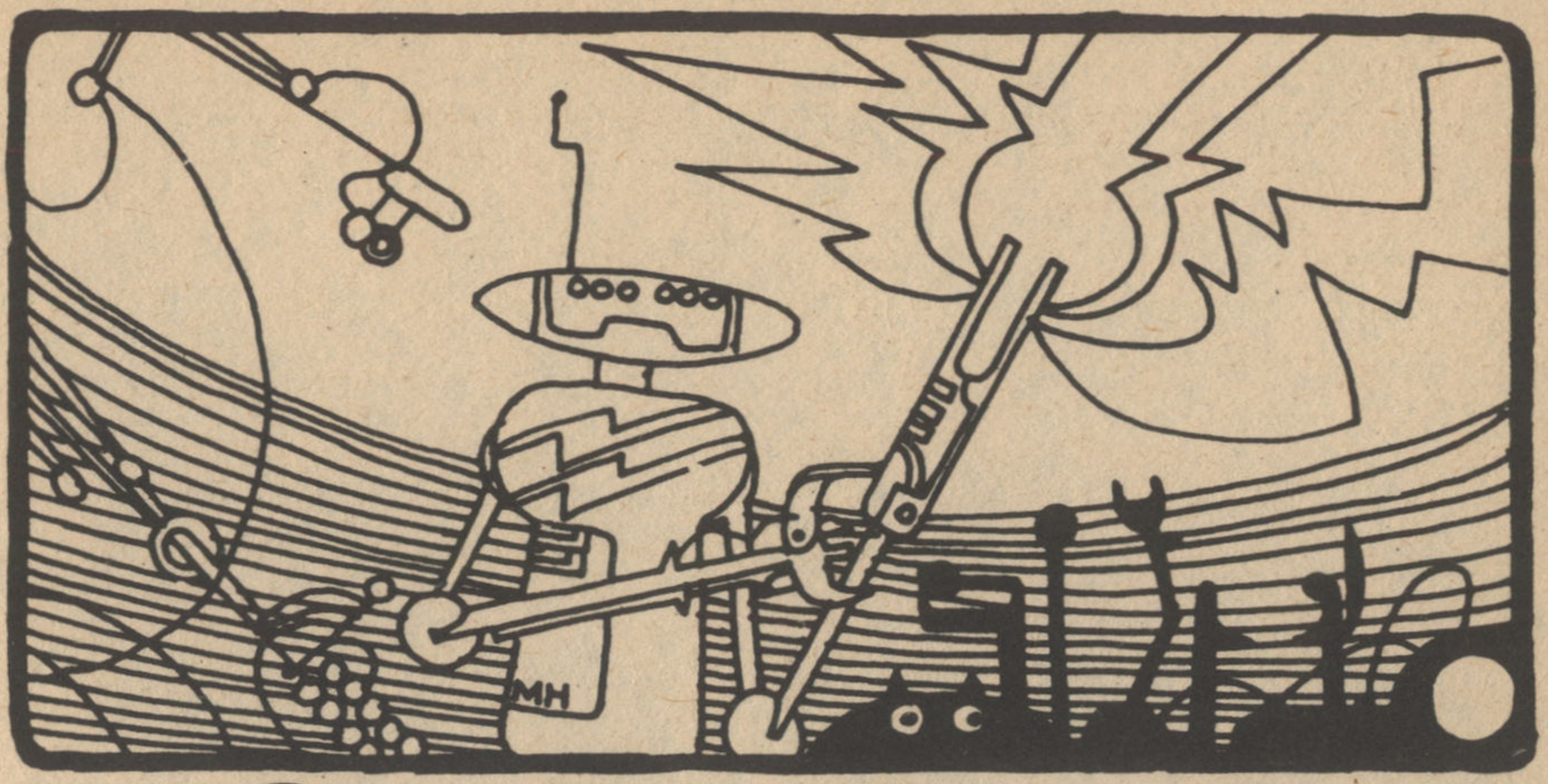
Modelling clay is also prominent in Scientology Academies. It is used by students to demonstrate their understanding of and ability to apply concepts. The clay is molded to objectify the components of important principles, with each portion of the diagram labelled as to significance. The student must for himself isolate and represent the essentials of the concept so that it is easily recognizable to another—from this clay demonstration, the student's "answer," the instructor must ascertain the "question."

There are many, many courses available in Scientology, among them the technology of study itself, how to be an executive, how to apply the processes of Scientology in an auditing session. The first course—the common denominator to which all other courses refer—is communication.

SUMMARY

The application of the philosophy of Scientology and its sub-study, Dianetics is a uniquely pragmatic, yet truly religious approach to life, the use of which assists the individual to confront and deal with the problems of the contemporary world with integrity and spiritual assurance; to partake of the joys of living, and to renew consciousness of freedom and the variety of experience that art, culture, and science afford him. At the same time, it enables him to give more fully of himself on behalf of the advancement and well-being of his community, country, ecology, and all mankind.

To the stars . . .



...Or So You Say

Letters intended for publication should be typed, double-spaced, *and addressed to* Or So You Say, *P.O. Box 409, Falls Church, Virginia, 22046.*

Dear Mr. White:

Just read the conclusion of Piers Anthony's "Orn" in the Sept. 1970 issue of AMAZING and regret missing the first installment. Though lacking the dramatic impact and coherence of *Omnivore,* his skilled application of evolutionary principles had me reading far into the night. So I'm happily reading along, flip to page 102, and step off into the void. What the hell happens next? Ordinary one-word typos don't bug me since the built-in redundancy of language fills in the gaps, but what does one do when X lines or pages are missing? Now I'm going to have to borrow the book from some other sci-fi nut to clear up the mystery.

The postscript of the story rates inclusion in any first-class paleontological textbook as a plausible explanation of Paleocene extinctions, which is only natural considering Cal Potter's incisive intellect.

Joseph J. Lischka
1309 E. Lee
Tucson, Arizona, 85719

If you're looking for a copy of the first installment of "Orn," copies of the July, 1970 AMAZING are still available from the Publisher. If you're concerned about missing lines in the second *installment, fear not: the pages are simply numbered (and arranged) out of order. Pages 100 and 101 should follow page 97, and they in turn should be followed by pages 98 and 99, after which 102 makes more sense. (I explained this mixup last issue, but considering the seriousness of the error, I think it deserves repetition.) —TW*

Dear Ted:

Your fascinating comments on Harlan Ellison's new book, *The Glass Teat* (which you succeed in making me want to read) reminds me of an exchange I had with Jim Blish some years back when I

read his novel, *The Star Dwellers.* He had a brief discussion relating to the matter of imprinting and corrupting juvenile tastes, and I wrote to him saying, in effect, "Come on, now, do you mean that evil, cigar smoking, poker playing old and young men on Madison Avenue sit around wickedly conspiring to corrupt juvenile tastes?"

No, he replied, I think you missed the point. What they sit around discussing is how can we make a lot of money fast? And the answer that comes up is, By corrupting juvenile tastes. Imprint them with musical trash, exploit their inexperience with anything better, and garbage will henceforth be their standard of "good" in music; then you tie in the stars of this type of performance with sweaters, breakfast foods, etc., and everybody concerned makes a pile. The corruption is not the prime move, but the by-product, and greed for a fast buck is hardly concerned with consequences. (I'm not quoting Jim above; but this is what he actually said paraphrases to.)

I think the same principle applies, for the most part, to what has happened to television.

It is not impossible, of course, that at times, and to a limited extent, the corruption of taste is a motive in itself from the start. But I entirely agree that this is a small enough percentage of the picture to ignore, and that the picture would be little different were it not to exist at all.

Congratulations on the continuing excellence of AMAZING and FANTASTIC; as I mentioned to you in person, I enjoyed "By Furies Possessed" very much, even if the ending (correct in itself) seemed to have less convincingness all around than the first part. But that is a very difficult thing to do, and far better known authors than you have fallen entirely flat in this respect, where in your novel I found only a slight let-down by comparison. Evil is easy to depict convincingly, while good is very hard to make exciting; at least, you didn't trail off into slush.

Needless to say, it's your editorial, and the other departments in the Magazines, that I can't wait to read, while the rest usually does wait; nonetheless, I find an encouraging percentage of the fiction rewarding when I get to it, and especially enjoyed "Hassan," "Orn," and what I've read thus far of "Always The Black Knight." I hope you'll keep them coming for a good time to come.

Robert A.W. Lowndes
717 Willow Ave.
Hoboken, N.J., 07030

What strikes me as remarkable is that the public is not simply a willing accomplice, but demands *such contemptuous treatment—as the long-standing popularity of such television shows as "The Beverly Hillbillies" proves.* —*TW*

Dear Ted:

Probably high up on the list of the writer's most useless pursuits, is that of protesting reviews of his books. The reviewer always has the perfect retort: "Well, that's *my* opinion." A reviewer may be right even in his prejudices, but if he has a strong anomosity for a certain author or prejudices for or against a certain type of book, I do not believe he should be given the book to review.

In the case of my book *Under The Moons of Mars:* "A History and Anthology of the 'Scientific Romance' in the Munsey magazines 1912 to 1920," reviewed in the November, 1970 AMAZING STORIES, I believe a fair claim of unusual prejudice can be brought against Richard Lupoff reviewing my books in general and this book in

particular. Both of us have been engaged in acrimonious debate centering around his theories as to the origin of Edgar Rice Burroughs' Mars series and other items related to Edgar Rice Burroughs. These exchanges have appeared in the fan magazine *ERB-dom*. Additionally, the book under discussion, *Under The Moons of Mars* presents the evidence, with names and dates from the files of the Edgar Rice Burroughs estate, which in my opinion, and in the opinion of many other prominent Burroughs bibliophiles, completely shatters Lupoff's theories. Under those circumstances, he could scarcely be expected to give an unbiased or unemotional review.

There is no such thing as an error-free book of original research, and I do not make the claim. In fact, I am assembling a list of errors for the second printing and would appreciate any received. I have five so far, some of them of the magnitude of typos where 1918 was inadvertantly put in for 1919 and where there was a transposition in the spelling of Leo Margulies name. Any sent to my home at 361 Roseville Ave., Newark, N. J. 07107 will be gratefully acknowledged.

However, there are errors of various degree. When Richard Lupoff offered his own experience in finding past errors in my books he failed to list any specifically either then or now, and certainly nothing of importance that he could *prove*. In suggesting that James Blish knew that my previous works were "absolute nests of faulty information," he failed to cite two facts: 1., That I have severely taken James Blish's book *The Issue At Hand* to task on ethical as well as factual grounds, and 2., that Blish in a rage had written a review of my book *Seekers of Tomorrow* for AMAZING STORIES in which all he could present was a number of typographical errors, semantic disagreements and heresay assertions. As you personally know, there was an exchange between Blish and myself so sharp as to make any statement on his part regarding my works as suspect. As to Lupoff's allusion that Blish has the knowledge or qualifications to judge my type of science fiction research in depth, it deserves little more than contempt.

It should be further pointed out, that *all* the material in *Seekers of Tomorrow*, except introductory and round-up chapters, had first appeared in AMAZING STORIES, and that the greatest part of the information contained had been received from the author subjects themselves. Since they were published over a period of five years, there was ample opportunities for those who found errors to write to the magazine or myself. Some did, and these were corrected before book publication. Following book publication every author who had a chapter in the book was sent a complimentary copy. Since the hardcover book went into a second printing, which was followed still later by a paperback edition, there was a second and a third chance for rectification for any who had complaints. If, after all of that, they did not notify me of errors, it can be assumed that either they were very minor, there were none, or that the authors were extremely kind.

Under The Moons of Mars contains a 70,000 word history of science fiction in the early pulps (actually some information as far back as 1889) running through to 1920, that is virtually 100% original research. I flew out to the Edgar Rice Burroughs estate and went through their vast files. I obtained access to the records and files of the Munsey magazines. I interviewed dozens who had worked on the magazines during the period under review or knew someone who

had. I spent $5,500 on thousands of the old Munsey magazines to work from. I consulted with outstanding science fiction collectors in the field.

The distillation of this research, the key elements of possibly one thousand letters, 200,000 file cards, and the thousands of magazines enabled me to include material on sources of stories, original titles, original lengths, revisions, dates of submission and acceptance, rates paid for them, history of submissions and even the addresses the authors were living at when they wrote and sold the stories.

An entire chapter is devoted to the H. P. Lovecraft debate that appeared in ARGOSY and ALL STORY from 1913 through almost to 1920, material never previously assembled. Brand new information on the legendary THRILL BOOK magazine appears for the first time anywheres. The book provides a history of the early pulps as a backdrop for the role that science fiction played in their development. This book was written for the people who really take their science fiction seriously, and I meant exactly what I said in my preface: "In a very conscious sense it *(Under The Moons of Mars)* has been written and edited for those men and women I have the greatest affinity for—those people whose serious interest in this field has been its bastion and whose judgement I respect—the experts and long-term advocates of science fiction and Edgar Rice Burroughs, who above all I would not want to disappoint."

Sam Moskowitz
361 Roseville Ave.
Newark, N.J. 07107

P.S. You probably are already aware of it, but in case it has slipped your mind, April, 1971 will be the 45th Anniversary issue of AMAZING STORIES. This incredible record of continuous publication should not be permitted to pass without some special effort to make the issue memorable.

Richard Lupoff replies:

With regard to Sam Moskowitz's "protest" against my review of his recent book, I must say that the tone is much more temperate than I had come to expect from him, and I certainly welcome a trend toward rational discussion of issues and away from personal vituperation. Moskowitz refers to an "acrimonious debate" between himself and me, in the fan press, over the origins of Burroughs' Martian adventures.

I know of at least three schools of thought on that subject. My own belief, which is shared by such Burroughs "authorities" as Donald A. Wollheim, is that inspiration for the planet Barsoom and the character John Carter is to be found in the works of Edwin Lester Arnold. L. Sprague deCamp and Fritz Leiber favor the works of Helena P. Blavatsky as the likely source. Moskowitz and Stuart Teitler (a fantasy book dealer and truly outstanding scholar) favor the works of Gustavus Pope.

Then there are those who prefer to keep their regard for Burroughs totally pristine, and refuse to discuss possible sources of this type.

The point of the "acrimonious debate," however, is that while all of the persons named above—*except* Moskowitz—have limited their discussion of possible Burroughs sources to the topic at hand, Moskowitz's tactic has been simply to revert to name-calling. In one such article supposedly dealing with Burroughs and his sources, the epithets flew thick and heavy and about the *mildest* one used was "charlatan." (I'm afraid that the article in question drew a similarly heated response from me: while not the world's

most unflappable man I do think I have a fairly high tolerance for irritation, but that time it was surpassed.)

The point here, as I suggested above, is one of whether we are going to discuss matters of substance, or whether we are going to sit around and call each other nasty names. Terms like ". . . completely shatters Lupoff's theories," and ". . . deserves little more than contempt," while colorful, are hardly conducive to calm and substantial debate.

Still, one ought never to give up hope of replacing acrimony with courteous discussion. I don't mind your readers' knowing that you and I, Ted, were at each others' throats periodically for a matter of more than ten years; that problem was finally brought in hand, and while we may still disagree over any number of matters, we don't have to engage in personal unpleasantness to do so. Perhaps Sam Moskowitz is beginning to understand this principle, and if he is, I most heartily applaud his doing so.

To return to *Under The Moons of Mars*, let me reiterate what I said in my original review (or meant to say—if anyone misunderstood me, I'm glad to make my position clear). This book, particularly Moskowitz's "history," constitutes a significant piece of scholarship based on a gigantic job of research. It is regrettable that the research is not wholly reliable, but Moskowitz himself admits that this is so and asks for corrections to be included in later editions.

This is a device which I used in my own book about Edgar Rice Burroughs; there is in print a second edition which contains many corrections to the first edition. Should there ever be a third edition, I'm sure that there will be further additions and corrections. That's the nature of research. Bob Silverberg commented to me that "The day your book is published is the day you *start* learning about your subject." I think that's an exaggeration, but I don't think it's basically untrue.

So then, if Sam Moskowitz is truly moving away from *ad hominem* devices and toward calm and courteous debate of substantial questions, I applaud him most heartily and sincerely. This is the way the world may be saved.

Richard A. Lupoff
Berkeley, California

Due to a shift in our publishing schedule several years ago, there will not be an April, 1971 issue of this magazine. However, we do have plans for the May *issue—our next issue—in celebration of our forty-fifth anniversary, and I have some rather way-out ideas for our* 50th *anniversary, only five years away now! —TW*

Dear Mr. White:

In the lettercolumn for the November AMAZING, Allan Yee tells of looking through a copy of *Seduction Of The Innocent* and not finding the dirty picture of a man's shoulders. You reply that possibly the illustration was either removed from later editions of the book, or else it was actually included with a magazine article instead of a book authored by Wertham. In the first place, I'm not sure that the book had more than one edition, and secondly, once you look at the thing from Wertham's angle, it *does* look dirty! I doubt if the magazines of the time would have had the guts to print it.

The truth of the matter is this: some libraries remove the pictures from the middle of the book. I noticed it when I read the copy in the Mount Vernon, Ohio library several years ago. The pages in that copy had been very neatly cut out. Since, I've made it a point to look the

book up in libraries wherever I happen to be, and most, though not all, have copies with the pictures taken out. I mentioned it in my fanzine a while back, and a good number of the replies indicate that many other libraries around the country have done the same thing. Apparently, Yee has seen such a copy.

In a letter to me commenting on the problem of people removing pages from his book, Wertham says that right after publication but before distribution of *Seduction*, the publisher suddenly decided to have bibliography of comic book publishers cut out, and most copies are missing pages 399 and 400. Oddly enough, my copy, which I got along with a pile of other books the Westerville library was throwing out, has both the picture section *and* the bibliography.

By the way—if you're going to write an editorial which in part concerns a book you read 15 years ago, why don't you at least skim over it again? It hurts to see you groping dimly through your memory for half-forgotten details.

Dwight R. Decker
50 Cherrington Rd.
Westerville, Ohio, 43081

Well, Dwight, if I'd had a copy of the book, I'd certainly have "skimmed" it again—if only for a few of the Good Doktor's better quotes. But I loaned it to someone years ago and haven't seen it since. Nonetheless, my memory was surprisingly accurate, as both your letter and the one which follows indicates. —TW

Dear Ted:

Yesterday I purchased my copy of the November, 1970 AMAZING. I haven't as yet had time to do more than read the regular features; I hope to get down to doing some serious reading tonight. My purpose in writing this time is in answer to your request at the end of Allen Yee's letter on page 135.

You asked if anyone could supply you with information as to a certain illustration in Fredric Wertham's infamous book, *Seduction of the Innocent*. I recently obtained for my collection a copy of the book in rather shabby condition, but readable, which is what I wanted it for. I haven't finished the book at this writing, but I soon hope to. (My reason for getting the book was due to two things: 1. Harry Warner, Jr. mentioned to me in a letter that Wertham was on the loose again—that's my way of putting it, not Harry's—and 2. the fact that one of your editorials in a recent AMAZING touched upon this subject.)

Well, instead of merely supplying you with information about the illustration in question, I've decided to do one better. As I said, my copy is in shabby condition. Some of the plates in the book are loose. One of those happens to be of the picture that Allen and you wanted to know about, so I've enclosed it for your use as you see fit. Perhaps you can obtain permission to print the illustration in AMAZING.

As you can see by looking at the picture, they have a blowup of the man's shoulder, showing the so-called "dirty" picture. It is apparently of a woman's crotch. That is, the portion of the shoulder, when enlarged and blocked off as was done, appears to look like what I said. In my opinion, it can still be debated as to whether this looks actually like a woman's crotch. I don't think that it would be noticed or appear as "prominently" as it does if it hadn't been pointed out. It would take an unusually intelligent child, with an extremely sharp eye and a very lively imagination to pick out this detail. The child would also have to be of dubious mental character to make such a thing of it. I know that if any

of my friends started pointing out things such as this to me, I'd think they were sick. Naturally a child would pay more attention to the bosemy babes in the comic books, but, again, if they devoted far too much time to these pictures—more than the usual youngster would, then I think they'd have a psychological hangup. At any rate, it's apparent that Wertham must have spent considerable time combing through various comic books, looking for such hidden pictures. I never would have noticed it at first glance, or any other time I viewed the panel. I'd also be willing to bet that if you showed this picture to someone not familiar with it, and asked them to pick out a "dirty" picture contained within it, they'd probably answer with something to the tune of: "I can't find anything dirty, unless you mean that she-devil in the background, and there's really nothing wrong there, either." I don't really see how someone could pick out such an idea, when it isn't prominent, nor does it seem to be intentional. (It isn't even clearly drawn, if you want to make an issue out of it!)

Well, I hope that my letter and the enclosed picture will be of use to you, Ted. After you're done with it, I'd appreciate its return, since I want the book to be complete. I've enclosed an SASE for that purpose. While, I'm writing this letter, I'd also like to make mention of two other things connected with *Seduction of the Innocent*.

The first thing is something that I've noticed in the half of the book that I've read so far. To my knowledge, Wertham does nothing more than state facts as gospel truth. No where do I see any support of any evidence or documentation of any cases that Wertham brings to light. Either Wertham thinks that his audience has a photographic memory and has read everything he has supposedly based his book upon, or else he is stating theory and some conversations that he was in and things he remembers having read as gospel truth. A book of this sort should definitely have been documented to the full extent. To use an example of a book that is excellently researched and documented, see Richard A. Lupoff's *Edgar Rice Burroughs: Master of Adventure*. To someone unfamiliar with Burroughs' works, one can see very plainly that Mr. Lupoff put time and effort into the writing of this book. All quotes have sources given, so if one wishes to check a quote all he merely has to do is to read the book to find it. Whereas, with *Seduction of the Innocent*, there are no names, titles, dates or any such information given to help someone who might wish to follow up a reference. Many things are supposed, too. A ready example is the illustration on the same page with the picture I mentioned earlier. It is a milkman bending over the body of a girl sprawled out on the ground. He is saying: "JEEPERS! A dame—and she's been croaked!" The caption underneath the picture states: "*A girl raped and murdered.*" It is obvious that the girl was murdered; one need only point out the fact that the milkman is stating this. But raped? That seems, to me at least, that Wertham is taking something for granted. The girl's position gives no indication of this, nor does the fact that her clothing is not mussed or out of place. I consider this to be a prime example of the sloppy and biased atmosphere which pervades this book.

The second thing I'd like to point up is another indication of what seems to be Wertham's taking things for granted. In a copy of FREON #3 (From: Dwight R. Decker/50 Cherrington Road/Westerville, Ohio 43081. 40¢ per issue.), on page 4,

there is a letter from Wertham himself. I quote:

I was interested in what you said (page 7) about obtaining an "Uncensored" copy of Seduction of the Innocent. *People don't realize how much censorship there is—especially if one is against violence. There* are *no uncensored copies of* Seduction of the Innocent. *What happened is that in line with scientific scholarly tradition, my book had at the end of the text a complete bibliography of all the comic book publishers mentioned in the text of whose comic book illustrations were used. This was on pages 399 and 400 of the book. At the last minute before copies were sent out—and without my knowledge—this page was cut out. You can see where it was removed in any copy of the book you examine. I first learned of it when I heard from a bookstore that a purchaser of the book complained that he had a mutilated copy.* End of quote. Perhaps I'm lucky or I own one of the few uncensored copies, but I have both pages 399 and 400 in my copy. I suppose it could be called a sort of bibliography as the names of all companies supposedly used or quoted from—just the names, nothing else. There are no addresses given, or what titles these publication companies offer. Wertham says in his quote that he mentioned names of publishers used in the text. I notice that by far the number of quotes without documentation outnumbers those who are documented. He also uses quotes from various people without saying when and where they were said. Is this the type of "scientific Scholarly tradition" that Wertham uses?

Steve Riley
18 Norman Drive
Framingham, Mass., 01701

Steve enclosed the plate, and it is as he describes: there are three illustrations on the page. The one in the upper left-hand corner is the original panel which Dr. Wertham found so offensive. It shows a brawny man in closeup, head and shoulders; a rather demonic female is in the background (wearing a bra-like halter, and visable only from the chest up), saying "Stand! Draw not your blood in sight of the killer heads. They will live!" To which the man is saying, "Aye, five will live, but one shall remain silent—" To the right and below on the page is a cropped blowup from that panel, showing only the detail of the man's naked shoulder. The caption reads, In ordinary comic books, there are pictures within pictures for children who know how to look. *The drawing is typical of its period in style and rendering: as a shoulder, it's right up there in the muscle-bound Superman school. Cropped and blown up, it makes a rather inept rendering of a woman's crotch, if you can accept a pubic area of considerable vagueness, an absense of any real division between the legs, a peculiar imbalance in the heaviness of thighs, a lack of any waist or hip, etc. While I have no doubt that Dr. Wertham saw this as a "hidden dirty picture," I am equally certain that the artist did not intend it as such and that few readers of that comic "knew how to look" for it. Children somewhere around or just before the onslaught of pubescence have been known to become preoccupied with such famous sources of "dirty pictures" as the White Rock Girl,* National Geographic, *and, in my day,* Life *magazine. It's conceivable that such a child, under such circumstances, saw and pointed out this panel in this comic book to Dr. Wertham. But this says a great deal more about the child (and Dr. Wertham's gullability!) than it does the comic . . . which was pretty much my original point. In any case, my thanks to*

you both, Dwight and Steve, for the information. I'm returning the plate to Steve and perhaps he can have a photostat made for Allen Yee . . . —TW

Dear Mr. White:

Messrs. Lapidus and Krieg, I fear, mistake campaign rhetoric for evidence of some sort of diabolical paranoia a la Wertham. Would they, upon reading a Democratic flyer, conclude that the party was plotting to send all Republicans to the gas chambers? Funny though—I've never seen these two raise the slightest objection to *anyone else's* polemics, no matter how extreme.

Based on the first installment of Bob Shaw's "One Million Tomorrows," I have high hopes for the novel. Shaw, of course, isn't the first writer to question the benefits of immortality, but he's taking a fresh approach and bringing in some new angles that could make the novel a classic on the theme. Based on the experience of "The Palace of Eternity," however, there's no telling where Shaw will turn—I hope it doesn't turn out that, deus ex machina, "Mother Nature" herself is the one trying to kill Carewe!

Your editorial for November was one of your most lucid. The problem behind pollution and a lot of other things is short-sightedness—no one cares what happens the day *after* tomorrow. I think, indeed, that the main virtue of science fiction may be in encouraging people to think beyond the range of the moment and about the long-range consequences of our actions. The problem of civilization today is not that civilization is bad, but that 95 per cent of the people aren't civilized—they're still barbarians (and I don't mean just the poor or people in "backward" countries, either). Civilization hasn't corrupted society—society has corrupted civilization.

Noel Loomis' "A Time to Teach, A Time to Learn" was interesting, but mainly as a variant on Lloyd Biggle's "And Madly Teach." Can't say I was too impressed by Gerald F. Conway's "Through the Dark Glass." If a new writer can come up with no better a punch line than the old complaint that God is dead, I'll withhold my praise. As for the background of mass psychosis, that's been done better by others. Jack Wodhams' "Enemy by Proxy" was interesting too, but again, a variant on typical Philip K. Dick stories of the 1950's.

I read Barry Malzberg's piece very carefully. I still don't know anything more about dianetics than I did before. Meanwhile, I gather, somebody else has written a whole book full of revelations. But the Benford-Book article was up to their usual standards.

John J. Pierce
275 McMane Ave
Berkeley Heights, N.J., 07922

I think you missed the (somewhat eliptical) point of Conway's story. "God is dead" was not the point or the punchline. As I read it, an entire novel lay, by implication, compressed between its lines. —TW

Dear Mr. White:

I have a completely open mind on the subject of Dianetics, because I've managed to ignore it for 20 years (and for an ardent s-f fan that takes some doing). After reading Barry Malzberg's article on Dianetics in the November 1970 AMAZING, I know neither more nor less about Dianetics, but I am forced to the conclusion that Mr. Malzberg is a careless scholar. I suspect that many readers will point out many flaws and

fallacies in the article as a whole, so I'll confine my remarks to two points in specific reference to the August 1950 issue of *Astounding*. Mr. Malzberg leaves the impression that because that was a bad, bad issue, Dianetics must therefore be bad, bad, bad; but that's not my main nit. My criticism is careless scholarship. Malzberg refers to Hubbard's letter, which he says notes "that of some 1,000 cards and letters only three were unfavorable."

The figure Hubbard gives is 2,000 letters, and that same figure is mentioned three or four times elsewhere. All right, so it's a very minor point. What difference does it make?

Malzberg refers to the Analytical Laboratory, which he says "points out that Katherine McLean's story in the June issue won first place . . ."

But the AnLab in the Aug. '50 Astounding did not even refer to the June issue, but to the May; and the winner was Poul Anderson's "The Helping Hand."

So maybe Malzberg was looking at the September, 1950 issue, in which the AnLab *did* refer to June? Maybe—except that Katherine *Mac*Lean's story came in third, not first.

Bad charges, indeed, Malzberg—bad scholarship.

Don Thompson
7498 Canosa Ct.
Westminster, Colo., 80030

Dear Mr. Ted White,

With reference to Mr. Malzberg's article concerning Dianetics I feel a reply from somewhere is necessary.

I started reading *Dianetics: The Modern Science of Mental Health* back in 1963-64. While reading that book I became so excited about it I wrote a letter to J.W. Campbell, knowing that he was a scientist and, from what I've read about him, an honest man. Where was dianetics now, is basically what I asked him and why didn't I see dianetic clinics around town.

The substance of the letter I received was that dianetics had been fairly successfully treating psychosomatic illness and that the AMA stepped in and stopped them—that Hubbard was infringing upon the Medical Profession.

Through the Seattle Library, I was able to obtain J.A. Winter's *A Doctor's Report on Dianetics*. Winter, an M.D. working as a psychiatrist, stated that in all his experience in dianetics he had never witnessed what Hubbard called "clear." However, he produced many "releases," while using the techniques of dianetics while treating people. He especially recommended other psychiatrists use the dianetic manner of making a patient repeat the relating of his painful experiences—Hubbard calls this repeater technique. Too often, he (Winter) stated, a psychiatrist would find the painful experience which was at the roots of a patient's problems but would be at a loss as to what to do with that experience. After his experiments with dianetics, Winter would make his patient repeat endlessly this painful experience until it erased from the patient's mind.

In an additional work on dianetics, the editorial postscript mentions that shortly after the first dianetic book appeared, Hubbard was forced to validate his dianetics. That even Karl Menninger "came to a sudden and startled hush and hastily refused to let psychiatry be tested alongside of dianetics . . ."

At any rate, dianetics is not dead but lives still—A. E. Van Vogt never left the field and he and Mrs. Van Vogt are actively developing the new science—no outsiders have ever proved it not to be a science. The Van Vogts have an

association in Los Angeles called the California Association of Dianetic Auditors.

Science Fiction enthusiasts, AMAZING SF readers who have not read ten or twenty SF novels 50 story collections by Van Vogt have got to be kidding. How could anyone, with the SF bug, not know the works of one of the most powerful writers in the field. *(The vast majority of these date from the forties—before Van Vogt discovered Dianetics.—TW)*

Those readers of Van Vogts works, upon learning of his personal interest and involvement in Dianetics ought to take note. Readers of Van Vogt can not help but become aware of his overpowering integrity. Thus, if he is interested in something that something must have meat on its bones at least. Twenty years is a long time to be interested in something in which mass-media magazines have insisted is entirely without scientific basis.

Let SF readers not forget that Aldous Huxley also interested himself in L. Ron Hubbard's work.

A new science is never welcomed with open arms; all the vested interests fear that changes will be forced upon them—that a better method will put them on the scrap-heap, where they unconsciously feel they belong.

Scientists are objective about their own science but not about any one else's—facts in their field are facts because they can prove them, but they have their doubts about what goes on in the other fellow's science—maybe his science is not scientific after all.

There is *no way* for an outsider to talk shop on the same level and in the same field as the scientist himself . . . no psychiatrist ever looked upon Hubbard as though he (Hubbard) might possibly have a better way—a faster method or a quicker approach than that used by psychiatric doctors. Hubbard was looked upon then as now as an arrogant ass, not as a possible genius with a great new idea.

If you knew you had a better way, spent your life proving it, it would be surprizing if you too didn't appear a little bit nuts to people who didn't care a damn.

Where the hell is that IN DEPTH study of Hubbard's ideas? If you don't know, let's not skim the surface—if you really know the truth say it like it is.

J. E. Stewart
18011 25th NE
Seattle, Wash., 98155

Apparently Barry's article angered the Scientologists considerably; more on this next issue (or, if the situation has been resolved in time, elsewhere in this issue) . . . —TW

Dear Ted:

Now that I've read "A Time to Teach, A Time to Learn," I can't wait for Loomis' *next* last story. Since Jakobsson has one, and you have one, I figure either Campbell or Ferman will have the next one, early in 1971.

On your cover, WOW! Just don't force feed Hinge to us like you-know-who has with Gaughan. Now, if Kaluta were to do a cover . . . *(Mike Hinge is now our art director, and will be responsible for the cover designs, beginning next issue. And we do have another Hinge cover on hand, to go with a story by Terry Carr, but we have no plans to change our present policy of using a variety of artists. Kaluta did the cover for the December FANTASTIC—and you'll be seeing him on the cover of a forthcoming issue of AMAZING as well. —TW*

This part of my letter is for Bob Shaw:

I suppose you have a fairly large

collection of old magazines. Go back to *IF*, May, 1968, a story called "Where The Subbs Go." Now go to *GALAXY*, Feb., 1965, "The Man Who Killed Immortals." Now, Mr. Shaw, if you take those two stories, shake well, and serve, you come up with "One Million Tomorrows." I just hope the thread of the story about someone after Carewe turns the story away from this semi-plagiarism.

David Stever
7 Lake Rd.
Cochituate, Mass., 01778

The word "plagiarism" is a particularly nasty one in the writing profession and it disturbs me to see it becoming bandied about increasingly often. A few months ago I was accused of plagiarising Heinlein; now you throw it at Bob Shaw. In neither case is it appropriate. I don't know whether Bob has those issues of those magazines (he once told me that copies of IF were hard to come by in Northern Ireland), or, presuming he does, whether he read those stories. Personally, I doubt it. But even if he had, I very much doubt that they formed more than—at best—an unconscious base for his novel. Ideas are a dime a dozen in this field; there's not one which hasn't been used many times before and by many writers, often without knowledge of each other. In approaching a basic topic like immortality, one makes choices of treatment and development and applies one's imagination to the task of carrying out these choices. In the process one makes the topic and associated ideas one's own. Aveam Davidson once remarked upon the coincidental publication of two stories by different authors who dealt with the same theme in nearly identical ways—simultaneously and without awareness of each other. Other authors can cite other cases of this sort. And many writers accused of "stealing" ideas have been found to have been unaware of their supposed sources—never having read them! I haven't read the stories you cite—and won't be able to for some weeks yet; my collection is still packed away—but I am willing to bet that the similarities are superficial. (And when I have a chance to read those stories I'll give you my report in these pages.) It is far too easy for a reader to point to a story and cry "plagiarism!" where in fact no such plagiarism exists. Please try to remember that you, in your superior tone of voice, have accused an author of theft—*after he spent weeks or months creating an original work of his own. And, I might add, it seems to me that readers who make such charges after having read only the first half of a novel are being entirely too precipitous. —TW*

Dear Ted,

I notice by today's issue of Charlie Brown's LOCUS that AMAZING placed third in this years Hugo voting, and that *Up the Line* came in second, largely I'm sure based on its AMAZING publication. Congratulations are certainly in order for both achievements, and also a prediction for the future: AMAZING has an excellent chance to win at Boston, for almost everyone I've talked to is as excited over the improvements made over the past year as I am. I'm prepared to nominate and vote it in next year, and I think my feelings will be shared by enough people to give the magazine its first Hugo.

Speaking about Hugos and firsts, it would seem at first glance that the new logo (which *is* a great improvement over the old) is based directly on the *ANALOG* style. Was this resemblence intentional, or is it simply that the *ANALOG* logo is an exceptionally modern design, and

when you attempted to be similarly up-to-date, you came up with something similar? *(More or less, yes. The new logo for this magazine—as with the new FANTASTIC logo which makes its bow next month—was designed to fit approximately the same space as the old. It was designed to be modern, sans-serif, and attractive. Esthetically, that demanded lower-case letters (perhaps you remember our uppercase logo of the fifties?). Both AMAZING and* ANALOG *begin with an 'A' and end with a 'G', which increases the opportunities for similarities. Actually, three logos were designed, of which the one we chose was not the closest to ANALOG's, being a less compressed face. Direct side-by-side comparison with that magazine will make other differences in the logos obvious. But the fact is, we wanted a graphically more handsome logo, and since ANALOG is an extremely well-designed package, we were faced with the choice of looking somewhat alike, or picking a less handsome logo. In the end we simply picked what looked best to us. —TW)*

Anthony deserves great credit for "Orn," both in subject matter and in style and treatment. The idea of trying to describe an alien mentality is quickly becoming a popular theme in current sf, and yet Anthony has managed to do a very original job of presenting a being based on "intelligent" instincts, and in making this being comprehensible to the reader. This has been a problem with several of the recent alien-mentality stories—an alien mentality is created, but the reader has as much difficulty following that mentality as the characters in the story. Not so here, certainly. In addition, Anthony has patched the two novellas which make up the story very well, and except for the somewhat obvious parallel sections, it would be impossible to tell that such a combination had ever been attempted. Major quibble—it seems as if Anthony was constantly reminding the reader about Orn's reliance upon instinct, rather than original thought. I realize that when writing a serial, one must make sure the reader remembers what happened in the previous issue, but it certainly seemed as if this fact was constantly thrown in our faces.

In general, I've been very impressed with Johnny's review column; his reviews have been well-documented and well-thought out, and even where I disagree with him, I'm forced to admit the validity of his positions. But I do think he's wrong about SCIENCE FICTION REVIEW, in amount if not in direction. Perhaps SFR isn't the joy to read it was a year or so ago; perhaps Geis isn't always able to keep the "dialogs" as witty as usual, perhaps some of the cartooning isn't always perfect. But I think he's rating the current SFR along with the best of the past issues, not with the rest of the current fanzine field. Even with all its faults, SFR continually has the best review column in any American fanzine, the best regular series of critical articles in any American fanzine, possibly the best lettercolumn in any fanzine. Again, I admit it isn't the single, shining light it was two years ago. But to list it "No longer recommended" is, I think, misleading—especially to the non-fan whose first contacts come through this column.

Greg Benford writes what seems the best review yet of *And Chaos Died;* he gives the novel the praise it deserves, both for what it achieves and what it attempts, and demonstrates why it isn't really successful. For me, the ending—in fact, the whole portion of the novel which takes place on Earth—really lost me. I wasn't sure what Miss Russ was doing, but I felt I

should have had more of an idea of what was going on than I did. I'm not asking for an "explanation" or anything so trivial; I'd like to be able to supply my own explanations, but first I have to know what is happening, and much of that final section simply became too hazy for me to do so.

This is totally selfish—I am young, where many of your readers are not—but if possible, I would much rather keep the smaller type size currently employed than give up any of the features. These have very quickly become integral parts of the magazine, and I think the departure of even one would prove harmful to the overall impression the magazine creates.

The November *Amazing* again stands out from the other magazines in the sf section, this time thanks to the liberal use of color and unconventional—for sf—artwork. Bright, brilliant colors like this just naturally attract the eye, and an unfamiliar style of cover art does the same, and thus Mike Hinge's cover, like Jones' for the August *Fantastic*, becomes of particular interest. Very nice, both his work and your decision in using it.

A totally impertinent question—did you especially commission Malzberg to write the dianetics article, or was it just hanging around from his tenure as editor of the magazine? *(Neither. As with all of Barry's work which I have published as editor of these magazines, it was submitted subsequent to his departure from his position as editor, without prejudice either favorable or unfavorable, and purchased on its own merits. The article is exactly what we blurbed it—on the cover, contents page and title page—to be: a personal report, a piece of personal journalism. —TW)*

You deserve a definite commendation for including reviews of Devore's Hugo book and Harlan's *The Glass Teat* in the book review section here. I've found the former almost invaluable in discussing the award systems, and despite the somewhat inferior mechanical production, recommend this very highly to anyone with an interest in the awards, whether past or present—for what won in the past can give an excellent idea of what is *going* to win tomorrow. And Harlan's book ranks with William Goldman's *The Season* as the best individual works on an entertainment field ever written. Goldman wrote the definitive book on the New York theatre, and now Harlan has produced perhaps the definitive book on television and its affects on the nation. A superb, engrossing volume, and I can hardly wait for the announced publication of the next volume.

Jerry Lapidus
54 Clearview Drive
Pittsford, N.Y., 14534

There are still letters here for publication but we'll have to hold them for our next issue. Your response to the November AMAZING was surprisingly heavy, and the choice of which letters to include was difficult. Many of you remarked on the problems you've had finding AMAZING in your area, and a few of you have expressed the fear that we'll simply disappear entirely one of these days ("You'd better stop publishing serials; the magazines could die any second and I don't want them to die with a serial halfway finished," is the way Scott Edelstein put it). The best answer, of course, is to subscribe if you can't find issues regularly. But preliminary reports on our September and November issues indicate rising sales, so take cheer—and stick around for our 50th Anniversary issue—five years from now.

—Ted White

(CONTINUED FROM PAGE 5)

weekend. I asked if I would be allowed to mention the magazines I edited, and she thought it was a fine idea. Thus armed with a full quota of plugs, I looked forward to the show.

It was a crushing disappointment, but the fault is mine in part: I had never bothered to listen to Miss Groebli's show and I was unaware of the gossipy nature of her public personality.

Friday the 30th dawned gray and dismal; a steady rain kept up all day. Fearing my unfamiliarity with the distances might make me late, I set out early and arrived with more than half an hour to kill before my appointed time of 11:45. WRC (radio and tv) is located far out from downtown Washington on Nebraska Avenue in a secluded enclave of its own not far from American University. To reach it one must pass by block upon block of secluded upper-class homes, often arranged one or two per block and well hidden from the road. The contrast with New York stations—all in the teeming midtown area—was marked. It was hard to imagine any aspect of harsh reality puncturing the insularity of the station's privacy.

A 12¢ cup of coffee in the cafeteria helped pass the time and instigate a mild case of heartburn, but Miss Groebli's assistant didn't show up to greet us until almost noon, and then with a casual nonchalance that had me wondering if I'd misunderstood the time schedules. (I had: the show didn't start at noon—it started at 12:05.) By that time my fellow guests had also congregated in the reception area: Fred Sparks, a witty old newspaperman who was plugging his book, *The $20,000,000 Honeymoon* (about Jackie and Ari, of course), Carl Loeb, who was plugging government-controlled legal gambling, and Captain Dollard, of the D.C. police department, a narc. Sparks was affable and interesting. Loeb had a one-track mind (Sparks to Loeb, after the show was over: "We've off now; you can stop orating") and read Agatha Christie to pass the time. Captain Dollard looked like a beefy hard-hat-mentality cop and turned out to be nothing of the sort.

We were ushered into a studio with a long table set up with mikes and a small mixer for Betty. At one end was a hideous jack-o-lantern carved of a huge pumpkin and decorated, it turned out, with eggplant, licorice and God only knows what else. Betty's assistant, Miss Cohen (no relation to our publisher) tried to take pictures of us before and after the show. She failed; the flashcube wouldn't flash. "We just had it fixed this Wednesday; I don't know what's wrong," she kept saying. And I kept suggesting she check the batteries, but it was not until we were about to leave that the Captain and I were allowed to check the camera and found the batteries were in wrong. It worked after that.

I had only the dustjacket of the book, *All In Color For A Dime*, but I'd brought that along with copies of the November AMAZING and December FANTASTIC, the most recent ones of which I had extras. These were passed around and appropriate comments made. "I had Arthur—what's his name?—Arthur Clarke on the show recently," Miss Groebli said, after telling us the rules of the show were to address each other on a first-name basis. "I called him 'Arthur' and he called me 'Betty,' and do you know, that man has supporters all over the country? It's like a religion. They all wrote in—hundreds of letters!—to chastise me for calling him 'Arthur.' He's 'Mr. Clarke' as far as they're concerned."

That was about the extent of her knowledge of, or interest in, science fiction, it appeared. She spent the first

third of the show asking Fred Sparks gossipy questions about the private life of Jackie and Ari, and about his (Sparks) drinking companions, and generally exhibiting a catty interest in the dirty linen of the famous and near-famous.

I received far shorter shrift. I was introduced as a "Space-science writer," and asked a few perfunctory questions, most of which appeared to be gleaned from the dust-jacket copy of the book (although she had said she had galleys of the book). I'm not even sure she mentioned the book by name (although I'd guess she must've—that must be reflex with her), and rather quickly she swerved into left-field, asking me to describe her "wonderful guest at the end of the table"—the jack-o-lantern—and asking me if I could guess what the ears were made of (it turned out they were eggplant—but we all flunked that question). I described it as "ornate," which seemed to throw her off. She then asked me my favorite comic, and when I didn't say "Little Orphan Annie," yanked the conversation around by asking me if it wasn't one of my favorites.

"No, it isn't," I said.

"But it's very popular," she said. "Why do you think that is?"

"I expect it appeals to the Silent Majority," I said.

Dead silence.

I did have a chance to briefly mention the magazines, and even the fact that Sol Cohen, our publisher, was Superman's first promotion man. But the one occasion when I was allowed to begin saying anything, I was cut off mid-word with a station-break, and after a very short time she turned to Carl Loeb, and his "debate" with Captain Dollard. (Since they did not disagree on basics, it wasn't a very heated debate.) During the final ten minutes all of us got into a fairly interesting conversation—involving such things as the new "No-knock law"—with Miss Groebli sitting it out. But that came to a fast halt as the time ran out, and then in short order (following the final successful operation of the camera) we were out in the rain.

I've been on radio and television before, and nearly every time to better effect. But this is the first time I'd encountered a typical mass-America reaction to science fiction. Miss Groebli knew what sf was—"Something my six-year-old might like"—and wasn't interested in any further education on the subject. I was obviously not a source of juicy gossip or controversy, so give me a fast shuffle and get on with it.

As a confrontation with ignorance it was typical and distinguished only by its public nature (the Betty Groebli Show is popular with Washington's daytime radio listeners). I had a chance—I thought—to put in a few good words for sf (on the side, so to speak), and instead I was presented as a "space-science writer" who didn't even know a good thing ("Orphan Annie") when I saw it. A real rube.

That's what we're up against in this country still—and despite all the glowing words about "mainstream acceptance" bandied about during the last decade. We are still less important than comic books—and they rank behind the comic strips like "Orphan Annie."

But in a couple of weeks I'll be at it again—same promotional bit, same effort to slip in the side plugs—on the Frank Ford talk show in Philadelphia. And since I'm an incurable optimist about these things, I shall hope for the best and we shall see if it makes any difference . . .

In our November issue, we published Barry N. Malzberg's "DIANETICS: The Evolution of a Science." This issue we are publishing "What is Scientology," by Rev. Robert H. Thomas, the Deputy Guardian for the U.S. Churches of Scientology.

A number of readers noted errors or inconsistencies in Malzberg's piece, wrote in to tell us so, and several of their letters appear in our letters column this issue as well (more may appear next issue if space permits). However, several of you appear to have expected a definitive survey of Dianetics/Scientology from Malzberg, when in fact his article was identified as "A Personal Report" on our cover, contents page and the title page of the article itself. For those of you who were disappointed with this failure on Malzberg's part, the present article may be of benefit.

However, I should point out that the Rev. Thomas's article is not a dispassionate survey or evaluation of Scientology. It was written in rebuttal to Malzberg and is designed to state the Scientologists' own case as persuasively as it might. It should also be added that our publication of the piece here in no respect constitutes an endorsement of Scientology by this magazine, its publisher or editor—any more than our publication of Malzberg's earlier article represented our endorsement of his position.

It is largely in the interests of fair play, then, that we present the Rev. Thomas's article. I regret that in publishing Barry's article (the purpose of which as I understand it was to trace the path of an offspring of science fiction and describe its subjective impact upon him in its present-day form) we inadvertantly opened a Pandora's Box. That proponants of Scientology might take issue with Barry's personal conclusions was perhaps inevitable, but I trust the publication of "What is Scientology" will close that Box again. I have no desire to turn this magazine into a promotional organ for any organization. My own feelings about Scientology's effectiveness do not enter into this, nor will they.

—Ted White

P.S.

We received the following note at presstime;

November 10, 1970

To the Editor:

It has come to my attention that an attorney claiming to represent the alleged interviewer in the introductory Scientology film mentioned in my November 1970 article DIANETICS: THE EVOLUTION OF A SCIENCE has stated that I have libelled his client.

I wish to put the following on the record: it was not my intention in ths article to make any comment or inference on the character of this alleged interviewer, who I do not know and have never met.

The article was a self-investigation written within the context of an enounter with modern Scientology. It was autobiographical in intention and execution and I had hoped that the context of this article would have made that clear.

Sincerely,

BARRY N. MALZBERG

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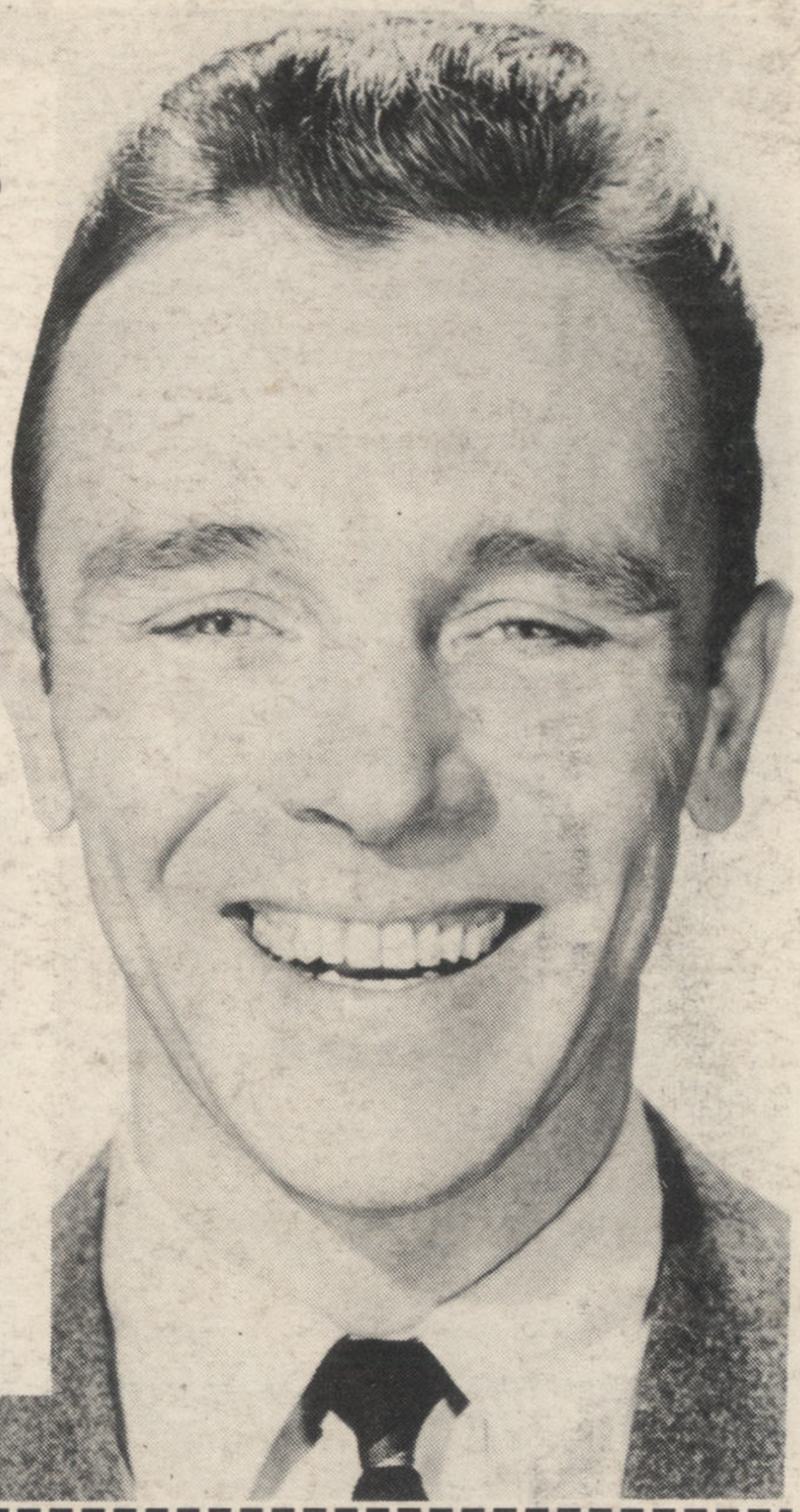

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