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EDITED BY JUDITH MERRIL



**THE YEAR'S BEST / OVER FORTY STARTLING,
IMAGINATIVE PROJECTIONS INTO THE NOT TOO
DISTANT, NOT TOO IMPROBABLE FUTURE . . .
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6TH ANNUAL EDITION THE YEAR'S BEST S-F

EDITED BY JUDITH MERRIL

A DELL BOOK



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INTRODUCTION

Science, they keep telling us, is "catching up" with science fiction. This is happily (at long last) true—precisely as it *must* be true that on any new frontier (space, surface, political, or academic) surveyors will replace the early scouts, and settlers may tread heavily on the surveyors' heels.

This succession is, indeed, the only sure way to determine the validity of the new frontier. And the more swift and certain the waves of succession, the better it speaks for the work of the scouts—and for the alertness and adventurous spirit of man's society. The rhythm of progress has a fixed pattern, but its tempo is variable in the extreme. Not all frontiers are still new when they are explored.

It was almost 2,000 years from the speculations of Aristarchus of Samos to the mathematically verifiable hypotheses of Johannes Kepler; three hundred more before Goddard and Tsiolkovsky (half the world round from each other) began to apply the principles of physical reaction (first observed in China in Aristarchus's time, and mathematically formulated by Newton in the century after Kepler) so that men could and would, a scant half century later, build vessels to carry them into space to test, with physical exploration, the "proven" theories of Kepler.

In any field of new knowledge, on all frontiers, concrete or physical, the fools must first rush out to see what the accepted angels of the day do not credit even enough to fear. The quixotic ass may be a "Somnium" or a glider at Kitty Hawk, a "Rights of Man," a burning bush, a dream of passage to India, a Unified Field of Theory, or a story of space. Whatever its form, it must take shape first in the imagination of some, somehow, less fettered mind, and pass, through the speculations of philosophers, onto the lathe of logic; if it turns true (however slowly or swiftly), it has become Accepted Theory.

With Theory, the cycle begins anew: someone must "dream up" (literally, just about) a completely new way to test a new theory. Better disciplined, less dreaming, men must refine the techniques; mathematical symbols must be found to describe in precise language the verified experiment. And—

With a new technique in hand, a new idea in the mind's storehouse, some new dreamer will first *imagine* the next step, and (barring final warfare) so on, and on, and—

J. M.

Milford, March, 1961

DOUBLE, DOUBLE, TOIL AND TROUBLE

by Holley Cantine

from *Fantasy and Science Fiction*

Between the purely imaginative and the solidly speculative, as between speculation and science, the boundaries can never be entirely resolved. Just now—when yesterday's *impossibles* are so often today's *probables* and tomorrow's *certainlys*—the once sharp dividing line between "scientific" and "supernatural" (or "reason" and "mysticism" or "science-fiction" and "fantasy") is especially hazy.

Hypnosis, for instance, is such a respectable adjunct of medicine today that it is difficult to recall how recently the words *mesmerist* and *charlatan* were almost synonymous. "Faith healing," of course, is still medically suspect—but "psychosomatic" is a vital part of every GP's new vocabulary. And while ultra-scientific pharmaceutical laboratories are rediscovering, renaming (and peddling) the curative agents in long-discredited witch-doctor drugs, a startling number of solid conservative public utilities are making use of "water witching" techniques for everyday chores.

It does seem about time to reopen the question (imaginative or speculative) of magic in general . . .

The essential nature of my mind is more than ordinarily rational and scientific, but there has always been a wild strain in it—magic fascinated me from early childhood. I couldn't entirely bring myself to believe in it, but there were times when I could suspend my disbelief until I could almost feel the thrill of upsetting the laws of nature, and had there been a reputable sorcerer available during such moments, I might very well have asked to be taken on as an apprentice. For the most part, however, I laughed at such fancies, and applied myself earnestly to the study of science.

I never did get properly launched on a scientific career, but this had nothing to do with my curious penchant for witchcraft. During my student days, I became so deeply in-

volved in radical activity that I presently abandoned all thought of seeking a berth in a university or research foundation—either of which would necessarily be subsidized and therefore, to my mind, controlled, by a status quo I had come to despise. Without waiting to graduate, I plunged myself completely into that complex world of intrigue and sectarian strife that passed for revolutionary politics in New York during the thirties and forties.

For some years, I lived for the cause, working sporadically at poorly paid, part-time jobs to keep myself in food and a cheap furnished room, so I could spend most of my time at the exciting game of plotting and counter-plotting, drawing up manifestoes, polemics and learned Marxist dissertations, and holding endless discussions with my comrades. It all seemed terribly important and significant. We believed that the Revolution was imminent, and that our miniscule, ill-trained and badly informed groups—or one of them, at any rate—would shortly be wielding power over vast masses of people. It wasn't a bad life, in many ways—it was certainly stimulating, and enormously gratifying to the ego, as long as one could continue to believe that we were the true elect—but there came a time when it began to pall on me.

To be perfectly honest, I suppose what woke me up was the arrival of a small legacy—not really very much money, but more than I had ever possessed at one time before. I knew that if I remained in the movement, it would soon be dissipated on printer's bills and rent for meeting halls, and I would be back where I was before it came. I was selfish enough to resent this, and for the first time began to take serious stock of myself.

The group to which I then belonged—it was called the Ultra-Revolutionary Left Socialist Workers' council, or something equally grandiose and pretentious—had been reduced by internal dissension to about 14 members, and there were rumors of an impending faction fight which might well split it still further. My comrades were all either narrow fanatics or callow youths, and their intemperance and wordiness increasingly had been getting on my nerves. Furthermore, the status quo seemed as solidly entrenched as ever. All in all, it seemed like an excellent time to pull

out, and retire to the country to think things through. I knew I could never achieve any sort of mental balance as long as I remained in the hectic, frenetic atmosphere of the movement. At least, these were my rationalizations—I guess I'm still enough of a Marxist to believe that the money was the real reason for my defection.

I bought a few acres of unimproved land on the side of a mountain, a hundred miles from the city, and at least two from the nearest neighbor; a second-hand jeep, which was the only kind of car that could negotiate the rough wagon trail that led to my property, and enough building material and equipment for a small cabin. The cabin was pretty crude—I hadn't much skill at that sort of work, but I learned a lot as I went along, and it kept out the weather, after a fashion.

By the time I had the cabin ready to live in, my money was all gone, but I was able to pick up enough odd jobs in the neighborhood to satisfy my simple needs, and still have plenty of free time. I found that by leaving the city, I had shed the radical movement like a bad dream. While I still believed vaguely in the desirability of socialism, once I had the chance to achieve some perspective, it became perfectly obvious that the wrangling little sects that had consumed so large a part of my life would never amount to anything and I was well quit of them.

To fill the void in my life left by the cessation of political activity, I began to revive my old interest in magic. I had acquired, over the years, a fair collection of books on magical lore—like all radicals I was an inveterate browser in second-hand bookstores—which I had not previously found time to look into seriously.

My only other hobby was early New Orleans jazz, an interest I had shared with several of my younger comrades in the city. I had a number of worn, but still playable phonograph records—chiefly marching band music of the Bunk Johnson-George Lewis school—and with part of my legacy I had bought a beat-up old slide trombone. When I wasn't poring over my books on magic, I spent my free time listening to records and teaching myself to play the horn. I made very few acquaintances in the area—the extreme gre-

garioussness of the movement had surfeited my desire for social life, and at the same time, its prevailing attitude of suspicion, according to which every stranger was a potential police spy, had so entered my system that I was wary about letting anyone get to know me intimately. I imagine my reserve might have broken down had there been an amateur brass band somewhere around, for once I had mastered the rudiments of the trombone, I longed for an opportunity to play with others, but the local town band had been disbanded some forty years earlier, and no one but myself seemed at all interested in reviving it.

The lonely, hermitlike existence I was leading, so much resembling that of a medieval alchemist, made it easier for me to take magic seriously, or perhaps the accumulated frustrations of my thwarted scientific and revolutionary careers had reduced my mind to an approximation of the prelogical stage. In any case, I found myself more and more receptive to the spells and incantations in my books, and soon began to try some of them, still half-believingly, but with scrupulous attention to the details of the formulae. At first, I had no more success than I had expected, but it amused me to continue, and I became obsessed with the idea that if only I could get everything exactly right for once, it might really work.

Magic is a tricky subject: there are so many factors involved that are next to impossible to control—so much depends on chance. One can never be sure of finding the right quantity and quality of a certain herb or root when the moon is exactly at the right phase and angle, and many of the ingredients were so loosely described that I could go by guesswork only. A lot depends on mood, too, and I could seldom count on keeping myself in the proper frame of mind long enough to complete all the preparations. I suspect that this has always been true, and that is why so few really potent spells have been cast through the ages, and why magic has fallen into such disrepute.

However, I did eventually succeed, if only once. At some point in my investigations, I worked the formula for doubling correctly, and while I was never able to get any other formula to go right, it convinced me that with sufficient

perseverance, I could accomplish almost anything. However, something kept me from persevering. I think I was chiefly frightened at the realization that I was dealing with something entirely serious, instead of idly amusing myself with a rather eccentric hobby. There was no telling where it might lead me. As it was, the one gift I had acquired was enough to change my whole life, and I don't know how many others. But I'm getting ahead of my story.

My way of life did not change much immediately. After so many years of skepticism, it was difficult for me to assimilate my new acquisition, and I used it sparingly. I continued to go out to work, but less frequently, since by doubling my provisions—at least those that didn't spoil: canned goods, bottled beer, salt fish and flour, which constituted the bulk of my diet—I could make them last indefinitely. For a comparatively small initial outlay, I could have lived on champagne, caviar and truffles, but I preferred beer and beans.

I avoided the doubling of money. I figured that a large number of bills with identical serial numbers would inevitably give rise to suspicions of counterfeiting, and if I paid all my bills with coins, that would look peculiar too. Occasionally, when I felt too lazy to go out and look for work, and was down to my last fifty cents—I kept a half dollar in permanent reserve—I'd double it a few times as a delaying action, but never enough to be conspicuous. I didn't want to make trouble for myself with the locals. Anyhow, a few hours of work every week sufficed to provide all the cash I needed, and that was no hardship for me.

As a matter of fact, once I stopped my magical researches, I had more time than I knew what to do with. Two hours of daily practice on the horn was about all I could sustain, without any outside stimulation, and there wasn't much of anything else I could find to occupy me. I considered resuming my interrupted scientific studies, but so many years had elapsed since I left the university that I dreaded to find out how much I had forgotten. Besides, I felt uncomfortable about going back to science after having trafficked in the black arts, rather as a whore must feel at the prospect of associating with respectable married

women. I could probably have carried it off all right, but I couldn't help feeling a curious mixture of scorn for the innocence of my potential colleagues, and shame for having violated their code. I did quite a lot of desultory reading, to help pass the time, but I had never had much interest in literature, and it soon palled.

Then one night I woke up after dreaming of being a member of a band—a perennial wish-fulfillment dream of mine—and it suddenly dawned on me that I could employ my gift to satisfy that desire. I got right out of bed—I knew if I waited for morning, I'd probably lack the nerve to try it; I was scared enough half asleep—and doubled myself. I hadn't tried to double anything more complicated than a salt herring until then, and while I had never failed at anything I had attempted, I had no way of knowing if I'd come out of the experience alive. I was just desperate enough to take the chance, though, and the result was, or seemed to be, perfect. The two of us looked at each other, laughed sort of hysterically, then we shook hands, and both of us doubled and redoubled. We all decided that eight was plenty for a start, and set about doubling enough food and drink to feed us. We had a feast, with plenty of beer, after which we doubled the mattress and bedclothes into enough for all—they pretty nearly filled the cabin—and tried to get back to sleep. But we were too excited and overstimulated; we kept giggling and skylarking like a bunch of schoolboys in a dormitory when the proctor is away.

Next day, we started right away to provide ourselves with adequate living quarters. Eight semi-skilled men can accomplish a lot more than eight times as much as one green hand, and to our surprise, by quitting time we had a site cleared of brush and largely leveled.

After we had knocked off work, one of us drove the jeep over to the workshop of a young Italian, who lived not far away, and who earned his living by providing and servicing band instruments for a number of high schools within a twenty-five-mile radius. Instruments that the schools had discarded—and public schools have gotten very particular about such things—he sold to the general public

at very moderate prices. I had had occasion to take my trombone to him for repairs a couple of times, and found him both sympathetic to impoverished amateur musicians, and a conscientious craftsman. He loved his work—he had learned the trade as a boy, most of his family being involved with musical instruments in some capacity—but the rough treatment the instruments received from the school children caused him endless pain, however good it was for his business.

Our man picked out a fairly new clarinet, made a down payment—I had been working fairly regularly and had accumulated a small cash reserve—and brought it back to our cabin. It was doubled, and about a week later—we didn't want to give the instrument dealer an impression of hopeless frivolity—the original was returned and traded in on a cornet.

Meanwhile, our new building was progressing rapidly. In a few days we finished leveling the site, dug it out to a depth of about two feet, and filled the hole with broken stone, this operation being vastly simplified by doubling. Then one of us went to the local lumber yard, and bought one each of all the materials we needed: a small bag of cement, a two-by-six, a two-by-four, a few different kinds of board, roofing, insulation, nails, a window and so forth. I don't know what the lumber dealer made of the order, but he certainly couldn't have suspected we were going to build a house with it, so there was no danger of gossip from that source revealing our plans.

We all felt that complete secrecy was vital. Now that we had each other, we had no further need of even the small amount of social life I had maintained, and we didn't want outsiders coming around and perhaps asking awkward questions. For all we knew, magic was still illegal: they used to burn and hang witches in the old days, and laws have a way of staying on the books long after they cease to be enforced. We all looked exactly alike, but as long as we took care to go out singly, no one could tell that there were more than one of us.

We mixed a bucket of cement, poured it into the hole we had dug, and by rapid doubling filled the hole with a

solid block of concrete. When it was hard, we built the wall frames on it, and raised them as units—like an old-fashioned barn-raising. We only had to cut one master rafter to double from, but even so, inexperienced as we were, putting up the roof was a big job.

Once the rafters were set, the rest of the work on the building went quickly. It was a large barnlike structure, with a high ceiling, and good acoustics. There were plenty of double windows, and a big wood stove, the kind they used to have in the elevated stations, which we picked up cheap in a junk shop. For illumination, we had a whole lot of big hanging kerosene lamps and a few small ones; we were too far from the power line to make electrification feasible, and anyhow, we didn't see how we could double electricity.

Inside, we left the walls unfinished, and put up no partitions. There was a wide shelf at one end, where we set all our mattresses side by side; a big table built out of heavy lumber, with benches on either side of it, sat in the middle of the room, and a sort of bar was placed near it, against the wall. On the bar was a three-burner alcohol stove—on which pots of soup, beans, and coffee were constantly simmering—a number of platters loaded with cold cuts, cheese, pickles, sauerkraut, and sliced bread, and a tub of bottled beer—imported German beer: since we had to buy only one bottle, we felt we might as well have the best—and a box of good cigars. At the other end of the room from the bed shelf, we arranged eight chairs in a semicircle, for our band practice.

We had returned the original of the cornet and traded it in on a baritone horn, but our building was so nearly finished that we decided against using any more trickery on the instrument dealer—we had been feeling pretty shabby about it anyhow, he was such a nice guy—and pay cash for whatever other instruments we wanted. We had used up all our cash reserve, what with down payments at the instrument store, buying building materials and food, but we had a fine oak tree on our property, tall, straight, and free of branches for at least thirty feet. We felled it, cut it into saw logs, snaked them out to the road with the jeep, and there doubled them into a substantial pile, which we

sold to a sawmill for considerably more than all the instruments we wanted would cost—the mark-down of second-hand band instruments being approximately as large as that on cars. The sawmill man had his own woodlot, and didn't like to lay out money for other people's logs, but when he found we were willing to take an absurdly low price, he bought readily enough. We weren't commercially minded—had we been, we could have easily made a fortune in almost any manufacturing or merchandising business—and the price we asked was more than adequate compensation for the relatively trifling amount of actual labor we had done. Unfortunately, in our enthusiasm we unthinkingly let him take every last log in the pile, thus preventing us from doubling any more lumber out of it to meet future contingencies. Timber was our only natural resource, and apart from that one tree, all we had was second-growth stuff, useful only for firewood.

We wanted the same instrumentation as the traditional New Orleans marching bands, lacking only the second cornet—all of us were determined to play different instruments: it was our only claim to individuality. We already had the trombone, cornet, clarinet and baritone horn, so we needed an alto, a tuba, and bass and snare drums. The alto cost only two dollars—the instrument dealer had an old one, that he said would require at least twenty dollars worth of his labor to take out the dents, and was willing to let us have it for what it had cost him, since used alto horns are slow sellers. We didn't mind the dents, and were well satisfied with the horn, which was otherwise in good working order. An E-flat tuba was twenty dollars, and the two drums came to thirty, complete with sticks.

It took us a while to get the feel of playing together, but we enjoyed it right from the beginning. The cornet and clarinet, although they had gotten their instruments first, and had a slight headstart on the rest of us, had trouble mastering the unfamiliar instruments—the three saxhorns were enough like the trombone, for which we all had a pretty good embouchure, that we could play them fluently right away. The cornet got his lip into shape in a couple of weeks, and this gave the band a tremendous lift. The clari-

net took longer, that instrument being completely different from any of the brasses. He was able to provide an accompaniment of sorts in a month or so, but the solo from "High Society" continued to elude him for the better part of a year. The two drummers had, in a way, the hardest time, since my sense of rhythm was the weakest side of my musical ability, but they persevered, and in time got pretty good, at least by our not very exacting standards.

I'm sure the ensemble would have sounded terrible to an expert, even at its best, but there is an exhilaration to playing in a group, even one composed entirely of dubs, and we were playing only for ourselves. Our tastes were identical, and our enthusiasm keen, so our technical shortcomings didn't bother us. Then, too, there was an unlimited supply of beer, and that helped us not to be too critical.

By conventional standards, our life was impossibly disorderly. We ate and drank when we felt like it, slept when we had to, and spent the rest of the time playing, or loafing around, reading and talking. We didn't even bother to wash the dishes—we kept a master set in a cupboard, and doubled from it when we needed any. Dirty dishes were tossed on the dump, which gradually reached monumental proportions. We solved the laundry problem the same way. Sometimes, when one of us came back from a trip to the dump, there would be talk of the advisability of working up the spell for making things vanish, but nothing came of it. We just couldn't be bothered.

It was, in most respects, a thoroughly satisfying life. The food was good, better than I'd ever had before. The soup and beans, from constant simmering, acquired a flavor that was unbeatable; the coffee, by the same token, was usually terrible—we were usually too lazy to start a fresh pot—but we didn't drink much coffee, and the beer was excellent. The only serious lack was sex. We kidded around about finding the most beautiful girl in the world and doubling her up for all of us, but we didn't really mean it. We were much too nervous about letting outsiders into our little world, and anyhow, we felt that the presence of women would probably take away more than it added. I had become accustomed to abstinence over the years, so I

don't believe we suffered too intensely on that score. We had no particular ambition about our music. We periodically discussed the possibility of going on the road if we ever got good enough, but that seemed a long way off, and wasn't important. We were having enough fun playing for ourselves not to need an audience.

We had little occasion to go out. Each of us took a turn doing a day's work every week, to maintain our cash reserve for replenishing food that had gotten too stale to be worth doubling, and paying the land taxes and repair bills on the jeep. None of these expenses was heavy. The tax assessors had not been around since I had completed my original cabin, and the day they had come, in the early spring, the trail had been like a creek, and they gave me a very low assessment. The new building was sufficiently concealed by trees and brush to be invisible from the road, so they never knew it was there. By judicious doubling of spare parts, tires and fuel, we managed to keep the expense of operating the jeep down to a minimum. On various trips to local garages, we had succeeded in doubling ourselves a rather impressive collection of tools, when the garage men weren't looking, and a couple of us had become pretty good at using them. Occasionally we had to resort to expert help, when something major broke down, but we didn't use the jeep very much, and it had been in good condition when I bought it.

The necessity of going out to work at all got irksome after a while, but this problem was eventually solved for us by the cornet player. When his turn came around one time, instead of making the rounds of prospective employers, as we ordinarily did, he drove to New York, where he pawned duplicates of his horn—which was by far the best instrument we owned—all along Third Avenue. He returned the next day, his pockets bulging with enough money to provide all our needs for several years, at the rate we were spending it. And when that was gone, we could always repeat the operation.

Just because I was able to work one spell successfully, I don't pretend to be an expert on magic, but I do know that the results one achieves are no more precise than those

from any other form of reproduction. Whenever we doubled anything, the double seemed exactly the same as the original, although there were probably subtle differences we couldn't notice, even in the simplest objects. When it came to highly complicated organisms like ourselves, however, the differences were easily discernible.

In appearance, we were identical enough to fool anybody, but our personalities showed marked dissimilarities. The cornetist and the clarinetist were by far the most accomplished musicians—I believe they must have acquired the largest share of my magical streak, but they poured it into their horns, and kept the band jumping. I guess I got most of my early scientific temperament, and the bass drummer clearly got the heaviest dose of whatever it was that kept me so long in the radical movement. He seemed like a throwback to my most ardent revolutionary phase.

For some time, these differences served to make our life together more interesting: our reactions were far from uniform, and this made our discussions livelier. But by degrees the bass drummer became more and more antagonistic to the rest of us. At first we thought that perhaps his instrument wasn't giving him enough scope, and several of us offered to spell him on the drum, and let him take a turn playing a horn, but this wasn't what he wanted at all. He had soured on our whole way of life, and this set up an unbearable tension.

He stopped playing with us, almost entirely, and one of the horn men had to take his place on the drum, while he sat around moodily, reading books on guerrilla warfare, or went out and did target practice with an old .22 he'd picked up somewhere. When the rest of us weren't playing, he'd almost invariably start an argument about the folly of wasting our priceless gift. We tried kidding him along, pointing out that we weren't harming or exploiting anybody, and the world would probably make a mess of the gift if we offered it, but this merely enraged him. "You're just a bunch of lousy renegades," he'd shout, "Bourgeois decadents. You could be out saving the world, and here you sit, fiddling while it burns." The only way we could stop it was to take up our instruments and drown him out.

We were neither surprised nor disappointed when he left, early one morning, before anyone else was awake. We couldn't be entirely sure he was really gone, at first, since the jeep was still there. Then one of us recalled being awakened briefly by the sound of the jeep's motor starting, and we decided he must have doubled it—none of us had ever dared attempt anything so ambitious before, but presumably it had worked. We waited for a few days to make sure he wasn't coming back, then the snare drummer doubled himself, bringing the band back to full strength again. The new bass drummer was fine, and we were all relieved to be rid of the old one, who had turned into such a drag.

He never wrote, but we picked up a few hints about his activities. One day, our tuba player was idly glancing through a New York newspaper at the store—we didn't read the papers with any regularity, but from time to time one of us would feel an urge to catch up on the news—and found an item about someone being arrested for soap-boxing without a permit and giving away samples of merchandise without a peddler's license.

It could be only our ex-drummer: who else would combine those activities? He must have been distributing a foretaste of the abundance to come. It surprised us all that he could be naïve enough to believe the police would let him get away with it. Of course, he hadn't given his right name, but the name mentioned in the item was one that I had once used in my politically active days.

The item didn't mention what kind of a sentence he had received, and although we looked in the papers for the next few days, we couldn't find any further mention of the incident. But a month or so later, a local gun-dealer, with whom I had been fairly intimate for a time when I first came to live in the country, ran into our clarinetist in town and upbraided him with mock indignation.

"What are you, a buyer or a creamer?" he had shouted. "You rush into the shop, demand that I bring out all my rare goodies, and the minute I turn my back, you're gone like a turkey in the corn."

Translated from our friend's jargon, this meant that our drummer, having presumably served his time, had come

back, doubled himself a supply of weapons when the dealer was out of the room, and left with them for an unknown destination. We didn't at all like the implications of that, but did our best to put it out of our minds.

After that we stopped looking at the papers, and almost entirely stopped going out. I guess we were all afraid of what might be happening, and concentrated on our music with what was close to desperation, avoiding any mention of the probable activities of our former colleague.

Then one day, when we were taking a break between sessions, and were scattered around the room, eating, drinking, tuning our instruments or just resting, we heard the sound of a jeep coming up the trail. The cornet man peeked out of a window cautiously—we were more apprehensive than ever about visitors—and the rest of us gathered in a worried crowd behind him, taking care to keep out of sight.

The sound of the motor came closer, and our lookout shouted, "Hey, dig this. Big Skin has doubled himself some playmates, and they're coming on like gangbusters."

We all rushed to the windows and watched the jeep drive up to the house and stop. It wasn't the double of our battered civilian jeep—it was a fairly new looking army model—but the four men in it were unmistakably the ex-drummer's doubles. They were dressed in semi-military fashion, with steel helmets of some foreign type, and were heavily armed. Their faces, though familiar enough in their general outlines, were considerably altered, when we got a closer look. They seemed misshapen, coarser, somehow; their mouths were tight and cruel, and their eyes had an expression of almost animal malignancy.

As they got out of their jeep and advanced toward the house, all the others piled out the door to greet them, with, I thought, rather forced joviality. I hung back a little; I didn't like their looks, and doubted their mission was friendly.

Sure enough, as soon as the seventh man was outside the house, the four of them opened fire with some kind of machine pistol. At that range they couldn't miss, but they continued to pour bullets into the bodies for a long time. I cowered in a corner, expecting that they would presently

hunt me out and shoot me too. Instead, they intoned, in a strange, harsh voice—in unison, so help me—"Thus perish traitors to the revolution," turned on their heels and marched back to the jeep, which left immediately.

It was then that it occurred to me that they had no way of knowing about the substitute bass drummer, and must have believed they had finished us all.

I spent the next couple of days in a state of shock, digging a mass grave and burying the rest of the band without ceremony. Then I packed a small bundle of provisions, and left. I was perhaps foolish to leave the one place where I was reasonably safe from reprisals, but I couldn't stand it there any more, and the thought that I could double myself another band and start all over again positively sickened me. I left everything as it was—even abandoning the jeep. I don't think I had any special motive. I was still pretty dazed.

The first few miles of my hike, everything looked about the same as it always had, but once I reached the center of the village, I realized that the violence against us had not been an isolated phenomenon. Most of the houses were scarred by gunfire, several had been burned to the ground, and there were no people around at all.

I continued through the devastated countryside, passing, to my utter astonishment, wrecked army vehicles of various kinds, and numerous corpses, both military and civilian. A good many looked as though they might have been my doubles, and were dressed roughly the same as the four who had visited us, but the majority seemed to be either regular army men or local residents. Obviously a running battle of some proportions had been fought over this terrain, and it seemed incredible that we hadn't been aware of it. However, our house was isolated, and most of the time we were making so much noise ourselves that we wouldn't be likely to hear anything else.

After some days of aimless wandering, I finally encountered a small group of ragged survivors. But they took one look at me, screamed, "There's another one," and ran off in terror. Since the next people I met might well be armed, I decided I had better lie low for a while, and holed up

in an abandoned house. In the cellar I found a pile of newspapers for the past few months, and to pass the time, began to read through them. They told me all I needed to know about the situation, and confirmed my worst fears. Inasmuch as I am probably the only person in a position to read between the lines, and explain what really happened, I am writing all this down, and plan to double it into millions of copies. It may be too late to save the country, but if not, surely an accurate understanding of the nature of the enemy ought to be more useful than the wild conjectures and speculations I find in the press.

I won't bother to reproduce the newspaper's version of events, since anyone who gets to see this will undoubtedly be already familiar with it, but here, as nearly as I can work it out, is a rough account of my double's actions to date.

After his visit to the gun-shop, he appears to have driven to Washington—the dates check to the best of my recollection. Once there, he must have doubled himself a few times, and made his way, armed with pistols, into the visitor's galleries of the House of Representatives and the Senate. There he did a lot of rapid doubling, and proceeded to clear out both chambers. I guess he sustained heavy casualties from the Secret Service men, but continued to double reinforcements until he was master of the Capitol. He must have been quite an army by the time he moved on the White House and took possession. To judge from the text of the manifesto he issued at this time—"The Bourgeois Government Is No More: The New Regime of Freedom and Plenty Is Now Beginning"—I would surmise that his mind had already begun to deteriorate as the result of excessive doubling.

During the next week or so, he was occupied pacifying the city of Washington, and trying to establish an emergency distribution system. This was his most benevolent phase; I believe he was completely in good faith when he offered free food and clothing to anyone who came to his distribution centers—it wouldn't have been any trick at all for him to produce unlimited quantities of merchandise. However, the population of the city didn't know that, and

it is hardly surprising that they suspected a trap, and left the city rather than take a chance on his generosity. This, I am sure, so infuriated him, that his already weakened mind broke down altogether.

Those congressmen who had escaped the massacre in the Capitol, together with those who had been absent that day, set up a provisional government in Virginia, and launched the army against the usurper—they apparently thought he was an invasion from Russia. I hope they didn't retaliate on the Russians with atomic weapons as the newspaper suggests they intended to do. This counter-revolutionary attack, as he calls it in his second manifesto, caught him in a grim mood; he doubled himself into a vast horde, which seems to call itself the People's Volunteers for National Liberation, and fought back furiously.

To judge by the newspaper reports on the early battles in the campaign, he must have depended entirely on force of numbers to overrun the regular army's position, and his losses were enormous. Subsequently, having captured, and undoubtedly doubled, heavier weapons, he began to fight more conservatively, but the prodigious amount of doubling that went on during the first few weeks of fighting had presumably reduced his forces to the brutal automatons that wiped out my comrades, and seem to be advancing steadily along the Eastern Seaboard. I don't know where they are now, the last paper in my collection being several days old.

This is an army that puts the ancient Mongols to shame. Not only is it able to do without any service of supply; since each man can carry all his own provisions and ammunition, doubling more as needed, but the supply of troops is inexhaustible, as long as just one of them remains alive, and they fight with a blind, savage fanaticism which has lost every trace of the idealism with which he started.

After reading some of the reports of wanton massacre, I have been strongly tempted to double myself into an army, and go out to try to destroy these monsters, but am deterred by one consideration. What is to prevent me from degenerating into their likeness, if I follow their example? Were not these fiends—and not so very long ago—myself?

THE NEVER ENDING PENNY

by Bernard Wolfe

from *Playboy*

It is of interest to note that the calling card of the author of the preceding story reads: "Holley Cantine—Writer . . . Agitator . . . Editor . . . Publisher . . . Printer . . . Carpenter & Builder . . . Brewer . . . Trombone & Tuba (funerals a specialty) . . . rates on request." Further investigation by your editor has revealed that Mr. Cantine also lives in a house in the woods which he built himself—for himself, his wife, and child.

Bernard Wolfe's approach to the Great Deception of the Carbon Copy lies clearly across the nebulous and shifting line that currently divides the possible from the distinctly improbable. His setting, treatment, and outcome all differ radically from Mr. Cantine's. I cannot vouch for Mr. Wolfe's experience with demons, imps, or well-dwellers in general, but his Mexican background should be authentic: his eminently readable biography of Leon Trotsky came out of the years he spent in Mexico as Trotsky's secretary. He is also the author of the memorable s-f novel, "Limbo."

So it went, peaches all day, complaints all night. "If not too big a work, could you make the voice somewhat softer?" he said to his wife. "I pick the peaches ten large hours today and even my ears fall down from tiredness."

He refrained from observing that her tongue might soon fall down from its labors.

"Pick the peaches ten years and the house will still be small like no house," she said. "We are seven, we shall soon be eight, and we continue to live in a house with one room, not a house, a species of shed, and therefore we live like pigs and what do peaches have to do with it?"

He studied their own well-fatted pig that was down at

the corner of the property snouting some superior mud from here to there. He refrained from pointing out that this shoat of theirs lived fantastically better than they did, having as many rooms as he had muds, no peaches to pick, no woman to make loud noises in his ears.

"We need at the minimum two rooms more," she said. "Then our neighbors will see that we are people and not some animals in a barn or a sty."

He did not draw her attention to the fact that she was making noises better suited to the barn or the sty. He liked Herminia, though she had a tendency to overtalk.

He adjusted his back to a more comfortable position against the adobe wall, wiggled his dusty toes, and considered the sun, which was dropping away behind the mountain like a darkening boil.

"I have explained before and I will explain again," he said. "To build even two small rooms requires many hundreds of adobe bricks. To mix the adobe, shape the bricks, dry the bricks, then further to place the bricks, is an immense labor. I pick the peaches ten hours a day for Mr. Johannsen and this is enough immense labor."

These words were said with a first-grade teacher's kind and crisis-easing voice.

"And when you do not pick the peaches for Mr. Johannsen?"

"Then I pick the beef tomatoes for Mr. Predieu and the iceberg lettuces for Mr. Scarpio. When I am not picking other people's various things it is my taste to sit against the wall and pick my teeth."

"For that," she said, "it is first necessary to chew on something."

"I agree with a whole heart. I will ask only why you bother to make this very true and intelligent observation?"

"Because if you do not build the two needed rooms you will very soon be without the things to chew on. Do I make this plain? Your cook will be home in Durango, where human beings do not live like animals. You can write me a long letter about how you do not pick the teeth any more."

She went in the house with both hands made into fists,

her rounded belly leading the way. Five children's voices came up in a soprano thunder, asking mama, dear and nice mamacita, for some pieces of crisped tortilla.

Life could be hard in this California. Troubles here had the tendency to grow like peaches and lettuces, in bunches. Though it was to be understood that even the much-accepting Herminia would not wish to bring out still another child in one cramped room. Yet adobe bricks would not grow in bunches, like peaches, lettuces and troubles.

He got to his feet and walked down close by the pig, to the well; to get himself some water. Standing there in his envelope of constant trouble, the tin dipper at his mouth, he said more or less to the pig, "I wish I had the miraculous penny."

This was what people like him sometimes said when they felt their troubles forming into a sealed envelope, themselves inside.

The pig maneuvered over on his back and flopped his happy feet in the air, perhaps trying to kick the sun.

From the bottom of the well a voice said, "What?"

When spoken to, Diosdado liked to give straight and full answers. So he explained:

"I was speaking of the penny that never ends, that when it is spent is replaced in the pocket with another penny. It is the poor man's idea of great wealth, of all the riches of the world, to have a penny in his pocket that always gives birth to another penny—"

The voice said, "If you have to empty out your head every time you're asked a question, write a book or hire a hall."

Then Diosdado realized that he was leaning into the well, talking to somebody at the bottom of his well.

A man with a one-room house guards what is his with more spirit than a man who owns international strings of castles.

He leaned over some more and said, "What do you think you're doing there in my well?"

"I do this without thinking," the voice said, "because it's my job and the thing I'm trained to do. These days we all specialize."

"What is that, your job?"

"Listening. You think it's easy when you mumble?"

"Then you listen to this," Diosdado said. "This is my well and I want you to get out of it and off my property."

"This well," the voice said, "is as much Mr. Bixby's as it is yours."

"Who owns a hole is who did the digging. You go back to this liar of a Mr. Bixby of yours and you—"

"Man, will you use your damned head for once? For more than to keep your ears in place? You dug this hole, yes, what belongs to you is the hole. You did not make the water that comes into the hole, I stress this, the water comes down from those San Berdoo mountains, from certain forest lands owned by a certain Mr. George Carol Bixby. Now, will you stop wasting my time and answer one simple question? Did I understand you to say you would like the miraculous penny, the never ending penny?"

"These were my words. It is only an expression—"

"All right."

"What did you say?"

"I said, all right."

"All right what?"

"All right, you can have the never ending penny. You've got it. Spend it in good health."

Diosdado turned a sympathy-seeking face to the lurching, wallowing pig. "Mister," he said, "you get down in my well where you have no right to be, a person I have never been introduced to, and you tell me bad jokes. It is impossible to have such an article as the never ending penny. This is only an article people wish for. It is an express—"

"I know what it is without speeches from you," the voice said. "The self-perpetuating penny, you might say, is my business. If you don't want it, fine, just say so. If you do, it's yours. What coins do you have in your pocket?"

Diosdado made another face at the pig, one pleading for the two sane parties left in the world to join against a general madness, and pulled all the coins from his pocket.

"Four pennies, two dimes and a quarter. This is what I have in my pocket and in the world."

"Fine. Now, put them in your shirt pocket, all but one penny. Put this single penny back in your pants."

"If it gives you pleasure."

"Now take the penny out, then feel in the pocket again."

Diosdado withdrew the penny, placed it in his right hand, reached inside again with his left.

There was another penny in his pocket.

He pulled this one out and explored once more.

There was a third penny.

There was a fourth. There was a fifth.

When there were fifteen or more pennies in the sweaty hand he looked for explanations to the pig, with beggar's eyes. The pig was busy juggling the sun with his paws. Diosdado began to shiver.

He thought he understood, partly, anyway, the excitement of this moment. Once, when a boy in Durango, while walking down a country road, he had seen a shine in the dust. His foot explored the mystery. The shining objects were bright new centavo pieces. At the sight of these unexpected riches he had felt precisely this kind of throat-tightening and eye-widening heat in a flash flood through his body. For one ballooning, scooping moment Diosdado had thought, what a glory if this place of miracles should turn out to be a well, a cornucopia, a production line of pennies. Can there be too much of a good thing?

Maybe this, the centavo with a big fertility, has always been a general dream of seven-year-olds. Maybe this is why it finally became a saying, an expression. But even, a six-year-old, even one not very bright, knows that the nice idea is finally in the head and not in the world. Some young sense of the true nature of things tells him that the perpetual penny is a pleasant wish, not a reasonable expectation. Dreams, he somehow knows, circle around the impossible.

Now here he was, he, Diosdado, with the dream of dreams in his pocket. He was a small boy again, kicking at the Durango road and finding the road fully co-operative, sensitive to his balloons and scoops of moods, jumping to his large orders.

"If you have the power to give this thing," he said shak-
ingly into the well, "why do you give it to me, a nobody?"

"For one thing," the voice said, "you asked for it."

"It is enough only to ask?"

"Oh, no, oh, no, we can't go around giving these things
out just for the asking. A lot of our countrymen come up
north here, you know, many of them have troubles and ask
for the repeating penny. We follow them and we listen to
them. In my territory, for example, Southern California, I
give out two or three of these pennies in a year, an average
year. There's no set quota."

"People around here call for the miraculous penny all
the time, why am I the one to get it, sir?"

"One, you're a steady worker. Two, you don't spend all
your earnings in the nearby bars. Three, you're reasonably
good to your wife, though you make silent comments at her.
Four, you have another child coming and could use the
penny, or think you could. Don't ask for more reasons.
Let's just say I like your curly hair."

Diosdado scratched his head. Absent-mindedly he pulled
two more pennies from the production line in his pocket.

"But, listen, if two or three people around here get the
penny each year, how have I never heard about this?"

"News like this doesn't get around, fellow. The owners
of these family-bearing pennies develop a very strong urge
not to tell anybody about it. You'll see."

Diosdado pulled three more coins from his penny garden
of a pocket.

"I've got to run now," the voice said. "Somebody over at
the Bixby place is making a racket about wanting the
penny. It's probably nothing, just a false alarm. Most of
my calls come from drunken bums in roadside bars who
have just run out of tequila and pulque money, but I've got
to go and see. Oh, one more thing. I have the power to
grant you two wishes. Now you have the first."

"And the second, what is that?"

"You make the wishes, I grant them. Do you expect me
to do all the work around here?"

That night Diosdado did not eat his supper. The kids
hooted and threw frijoles at each other and he sat there over

his food seeing and hearing nothing. The newly acquired pennies in his pocket were a ton of hotness against his thigh, several times he was on the verge of blurting out to Herminia the incredible thing that had happened but each time his tongue got stiff.

Herminia wanted to know why he did not eat his frijoles. He said he had eaten many peaches this afternoon at Mr. Johannsen's and was not hungry. With embroidered casualness he announced he was going to cut some kindling and went out.

As soon as he was inside his wood and tool shed he bolted the door and went to work.

Diosdado soon discovered that he could pull pennies from his pocket at the rate of one a second, sixty a minute, three thousand six hundred an hour. This meant he was making thirty-six dollars an hour, roughly what he got for a full week's work in Mr. Johannsen's orchards. It was good pay for a job that could be done with one hand, without climbing a ladder.

For one hour he stood drawing out the coppers and dropping them on the dirt floor. His arm was tired, a cylinder of hurt. He thought he might sit down for a time but it was too hard to reach into his pocket from a sitting position. Next he tried taking his pants off and lying down, but it was a strange thing, the penny would not reproduce itself when the pants were not actually on his body. He had to become a rich man standing up. At the end of the second hour he had almost seven thousand pennies on the floor, almost seventy dollars, and his arm was full of fever and gassy beer, there were shooting pains from the wrist to the shoulders. He was getting rich and he was getting lumbago.

He considered how much faster the harvesting of this penny crop would go if he could call in Herminia and the kids to help with the picking. With his whole family working they could go through the night in shifts. But it did not seem right to bring others into the secret, not even his near and dear.

Herminia called to him to bring some wood and he answered that he would be right there.

Now there was a problem. He could not leave a small

fortune in pennies lying around in plain sight on the shed floor. He felt it was better if his family did not know about the pennies that grew like toadstools that wish to make headlines.

In the corner there were some coarse burlap bags, left over from last year's flood season when he had prepared sandbags to build up the banks of the nearby stream. His seven thousand pennies almost filled one bag, which he hid under some odds and ends of lumber.

He went toward the house wondering why it was that he kept looking back. He was about to be the richest man in the world and he looked over his shoulder as though he had something to hide.

During the next days, whenever he had a minute, he went to the shed to pull pennies and fill burlap bags. Before the week was up he had to buy a new supply of bags at the general store, and his arm was so sore that he was not able to pick many peaches for Mr. Johannsen.

Finally he had so many full bags that there was no way to hide them in the shed. Some new thing had to be done with them to keep them out of sight.

He began to discuss the matter with himself:

"What are pennies for, exactly? For spending, this is certain,[†] yet I do not consider the possibility. Why not? Well, the first thing is, there is no way to spend ten thousand pennies, then ten times ten thousand, and so on. If I ordered adobe bricks from the brickyard and offered the man bags of pennies for them he would say, where did you get all these pennies, Diosdado? Could I answer that I got them from my left pocket, boss? He would get suspicious and tell the chief of police about it, or the tax collector, or both. Pennies can be deposited in the bank of course, just like dollars. Yet peach pickers do not usually have money of any type to place in the bank. The president of the bank would think the matter over and report it to the tax collector, or the chief of police, or both. There is but one way. I must hide these bags from all eyes. From my wife and my children, them especially. I did not know what a trouble it can be to have money. Surely it is not robbery

if I take pennies from my own left pocket, so why do I feel like a robber and keep looking over my shoulder?"

So he did not spend the pennies. Neither did he tell his wife about them. He hit on a way to hide the bags. He ordered a quantity of planks from the lumberyard and these he placed firmly in the ground in upright pairs, exactly along the lines where the walls for the extra rooms would eventually have to go. Between each pair of planks, using them for supports, he piled a vertical row of his plump bags, exactly as he had piled them to make a new bank for the flooding stream. Each bag contained ten thousand pennies, one hundred dollars' worth of pennies. The piles formed continuous walls, they looked exactly like walls.

Herminia watched with narrowing eyes.

"You wanted more rooms?" he said to her. "How can I make rooms if I do not first make walls?"

"I tell all the neighbors you are a good husband," she said, "but now I see you want to kill your whole family. What way is this to build walls without adobe? Make walls of sand and when the bags rot away in the weather the walls will fall down on our heads and we will be killed and buried in the same time. True, this way we save burial expenses. We have to cut down somewhere."

"This is a new procedure of making the bricks," he said, hating himself. "First, a special sand is put in the bags, second, they are permitted to shape and harden in the sun. It is a totally new process, woman. It was invented by the authorities on such things in the U.S.A. Department of Agriculture, Adobe Brick Division. Those of the government know the wall business better than you."

He wanted to kick and punch himself when he saw the full trust and respect in her eyes. But at least the pennies would be safe in this homemade bank. Because of the protecting planks the children could not feel around with their fingers to find out that these walls were filled with a sunshiny sand of dreams and sayings.

But the chief of police did take notice. He saw the walls going up and he drove in to have a look.

"Pretty big house you're putting up there," he said.

"Where'd you get the money for the materials? Come on, Diosdado, come clean, you rob a bank some place?"

Diosdado said he seldom had the occasion, let alone the constitution, even to go in a bank, let alone rob it, the funds came from picking the good peach crop.

But the chief's words were a worry.

The tax collector came by too.

"You're turning the place into a regular mansion," he said with too much arithmetic in his eyes. "A four-star palace. You must have had a peachy year, ha, ha, to afford improvements like these." There were dollar signs in his eyes as he drove away.

This was another worry.

By now the walls, the deceitful walls, were up ten feet or more. Diosdado took a pencil and paper and did some figuring. According to his count he had piled up two thousand bags, which came to twenty thousand dollars' worth of pennies. He was a man worth twenty thousand dollars and he did not have the cash to go in the store to buy a side of bacon or a new kitchen table, let alone more burlap bags. Added to this, the chief of police and the tax collector had their mathematical eyes on him.

If no more bags would fit into the walls, any he filled from now on would have to be hidden in another way. There was no other way. Besides, Diosdado was beginning to wonder if there was any sense to piling up more pennies in secret. To collect bigger and bigger moneys and be further and further away from the possibility of spending them, to do all this heavy work and have no pay from it, nothing but some false walls put up with backbreaking labor, more labor by far than it would have taken to make true and useful adobe walls, that is, walls about which a man would not have to tell rotten lies to his trusting wife, this did not seem reasonable. His arm was very tired. It hung limp at his side, a tube of misery. He was now the slowest picker in Mr. Johannsen's orchards.

He decided that, for the time being, he would not collect any more pennies.

Easier said than done. How do you go about throwing

away a breeding penny like this? A damned rabbit of a penny? Several times, in disgust, he tried to fling it from him. Each time, its twin brother turned up cozily in his pocket.

He began truly to hate this penny. He had not had a good night's sleep for weeks, even before the visits from the township officials. He had the stronger and stronger feeling that, ever since he had begun to collect the pennies, he had been involved in something criminal, something absolutely against the law. He was looking over his shoulder all the time now. His neck was getting as stiff as his arm.

He consulted with himself once more:

"I see why I have broken no law, yet feel like the Number One on the wished-for list of the FBI. I begin to see. This is not my money, though it happens to be in my pocket. It is not money at all, though it looks and feels like true money. The difficulty is that if you are given the magic of the seven-year-old you must begin to think and act like a seven-year-old in order to enjoy the gift. Why do I not speak to my wife any more? Because my pennies are the only thing I can speak of and they are the one thing I must not speak of. Why can't I tell Herminia about the pennies? Not because of the danger she might talk. Not that so much, though she is a champion talker. Chiefly because if I spoke of this magic she would see the seven-year-old in my eyes again, and this is not for a woman to see in a more so than not grown man. Why do I feel I am breaking the law? Because the first law is to act your age, which in my case is thirty-nine and not seven. This calamity of a penny cuts many inches off my height and how tall is a man to begin with? Besides, my arm hurts all the time. I must get rid of this affliction and plague of a penny."

But how lose a penny that won't get lost?

Standing by the well, speaking more or less to the upside-down pig as it pranced pointlessly, he said, "I certainly wish I'd never heard of this miserable penny."

From deep in the well there was a sound like the rush

of wind. After a few seconds the voice said as though from far off, "I'll be right there."

Diosdado waited. Pretty soon the voice came through stronger, though panting a little, saying, "Sorry to keep you waiting but those drunken bums over at the Bixby place keep running out of drinking money and yelling for the penny. Well. You were saying?"

"I have a worry," Diosdado said. "It seems to me there is something illegal about this magic penny."

There was silence for a while. Then the voice said with some irritation, "Look, up there you make laws, down here we make pennies. It's a division of labor. Don't tell me your troubles, I've got enough of my own."

"But I have to live with the law," Diosdado said, "and this penny is clearly against the law. I will tell you my thinking. There are only so many pennies in the country, an amount fixed by the government people. Therefore, if you put a large number of them in my pocket you must be taking them out of somebody else's pocket. If you are a true magician why do you have to be a thief? More, you must be robbing the poor, because it is chiefly the poor who save pennies. I have no use for the whole system."

"Didn't you hear what I said?" the voice came back. "We don't steal the pennies, we make them."

"Then you are counterfeiters. Isn't this a violation of the law, to counterfeit?"

"I don't have to sit here and take your insults," the voice said. "These pennies are most emphatically not counterfeits. We follow the specifications of the mint people of the U.S. Treasury in making these pennies, so-and-so much copper, such-and-such percentages of other metals, everything down to the last decimal point. We use no inferior materials, each penny we give you is a perfect coin of the realm. There's not a bad penny in the lot."

"All the same, all the same. There are supposed to be a certain number of pennies and no more. It's not right for me to have the power to add a million or a billion billion billion, this could upset all figures and banks. It must be against the law for a peach picker to have the strength to

overthrow the whole money system and also the government."

"You didn't call me over here to discuss the monetary system. What's really on your mind, man?"

"I don't want this penny."

"All right."

"What?"

"I said all right. Throw it down here."

Diosdado drew the coin from his pocket, breathed deeply, and dropped it down the well. Time passed. There was a sound, not of splashing, rather of a big and drawn-out yawn, accompanied by a flatted whistling. He thought he heard the ringing of a cash register from far away.

He reached into his left pocket. It was filled with a glorious emptiness. He felt a weight of some long tons of lifting from his shoulders.

"This is the second wish?" he said.

"Precisely," the voice said.

"Those who make the first, they always make the second?"

"Most always. As soon as they find out they can't spend these pennies, keep watching over their shoulders, stop talking to their wives, get funny looks from the tax collector, and so on."

"Nobody ever keeps the penny?"

"How it is in other territories I don't know, but since I've been on the job here there was only one man who didn't try to give it back. He was a gardener and tree pruner over to La Jolla. Know what happened to him? Interesting case, I wrote it up for our records. He went around telling everybody in town he had a nice mamma penny that kept making little baby pennies. This is not the kind of talk people wish to hear from a grown man, an experienced gardener and tree pruner. They did not wait to see the breeding penny demonstrated, they quick locked him up in a hospital for people who make wild talk. Naturally, I had to step in. We couldn't sit back and let this man build big piles of pennies all over the hospital just to show off, this sort of thing has a tendency to make people gossip and turn their attention from business. We don't have the authority to take the penny back un-

less its owner so requests, but in emergencies we can change the never ending penny into a never ending something else. What I changed this penny into was a Life Saver, wild cherry flavor. Now this man was going around the hospital telling all the doctors what he had in his pocket was not a mama penny but a mama Life Saver, wild cherry flavor. You can understand that this just made the doctors more sure they had done right in locking him up. What did this man begin to do with his self-replenishing Life Saver? Nobody would look at it. For lack of anything better, he began to eat the Life Savers. He ate and ate, and always had one more. So far as I know he's still eating away, all day long and far into the night, and I can tell you he's getting pretty damn sick of wild cherry. He was originally a bitsy fellow, one hundred twenty in his stocking feet, and they tell me he just passed two hundred and is still going strong. Good-by, friend. Maybe you've learned something from this. You *can* get too much of a good thing. But don't write the experience off as a total loss. You've got something to show for it. Just take a good look around. Good-by now, and don't take any wooden—sorry. Got to rush. Those drunks over at Bixby's are making a racket again. By, by."

Diosdado looked around his property. He saw a well, a shed, a hut, a mud hollow, a self-inebriated pig, in that order—nothing new. What did that voice mean, he, Diosdado, had something to show for it? All he had for it was an arm that was a hose made from end to end of major ache, and this was not to be shown.

But then he saw something that had not been there before the trouble-making penny. Attached to the original hut were two unusually large, very luxurious rooms, or almost rooms. Add ceilings and finish the walls properly and nobody could take them for anything but rooms. They were most emphatically not banks, because though moneys had been deposited in them these moneys were not for withdrawing. The walls could certainly be finished in the right manner. There would be no withdrawals from this gone-out-of-business bank.

Herminia came over to him from the hut and he put his arm around her, saying:

"Woman, you talk too much, but from time to time you say something. It is true, without adobe those walls do not work. Whatever the Agriculture Department says, those bags of sand will rot in the weather and make troubles. I will put plenty of adobe over the walls, on both sides, also, I will add ceilings, and you will have the two largest rooms on this side of the San Berdoos. Then my cook will not go back to Durango and I will always have something to chew on before I pick my teeth, yes?"

"Agreed," Herminia said. "This is a business deal not to be turned down," and she put one arm around his waist, then the other.

For over a week Diosdado picked no peaches. He worked around the clock, placing boards to make a roof, mixing adobe and plastering it over the bags and their wooden supports. Finally the walls, and also the roof, were covered with solid, substantial, homey-looking adobe. No rains could get in here, and no tax collectors.

The afternoon Diosdado finished his labors he walked over to the well with Herminia and turned to take a good look at the finished structure. It was a real house, a good house, the best-looking house in the valley.

"This is a house that could not be paid for in pennies," he said, half into the well, half toward the wallowing pig, very little for Herminia's ear.

With her tendency to comment on everything, Herminia said, "There is not enough money in all the world, pennies or dollars, to pay for this house," and put her arm around his waist.

He patted her promise-leavened belly and looked down into the valley toward the other huts and cabins nestled here and there. He thought about a hundred-twenty-pound man getting to be two hundred on one Life Saver, wild cherry flavor, and shivered. He wondered how many other homes in this valley had twenty-thousand-dollar walls, but he was afraid to speculate about this too much.

Down in the mud hollow the pig rolled on his back like a vacationing millionaire, trying, for lack of anything better to do, to punt away the molten centavo of a sun.

THE FELLOW WHO MARRIED THE MAXILL GIRL

by Ward Moore

from Fantasy and Science Fiction

In just one year's time, the change in the climate of our thinking in a "breakthrough" area is staggering. A year ago (while the public-at-large was still goggling at the official use of the word "Astronaut," applied to the seven men selected for Project Mercury training), a select group of scientists embarked on a systematic search of space for radio signals indicating the existence of other intelligent life in the universe. They called their project, charmingly if self-consciously, "Ozma"; and Harvard's eminent Dr. Shapley (who was, you must understand, a guiding spirit in the venture) referred to it as "high-class science fiction." The astronomers could no more help believing what half a dozen converging lines of research had already indicated than they could stop feeling slightly silly about believing it.

Two days ago, as I write this, the country's most staid newspapers headlined stories of the discovery of lifelike hydrocarbons in a sliver of meteorite: "Evidence of Life Beyond Earth Reported Found," and "Wax a Clue to Life in Outer Space—Trees, Plants, Even Men May Be Behind Meteorites."

We—and the pronoun becomes daily more inclusive, less exclusive—have begun to believe we are really not alone in the world. With this awareness comes (as for the babe in the process of distinguishing self from others) the first acute sense of need for a working system of communication.

After a couple of weeks Nan began to understand him a little. Nan was the third oldest Maxill girl. The wild one, they called her in Henryton, not forgetting they had said the same of Gladys and later Muriel; Gladys now high in the Eastern Star, and Muriel, married to Henryton's leading hardware and furniture dealer—Muriel, mother of the sweetest twins

in Evarts County. But they said it of Nan with more assurance.

Everyone knew Maxill had bought the old Jameson place, eighty of the most worthless acres ever to break a farmer's heart, the year after Cal Coolidge became President, because he—Malcolm Maxill that is, not Mr. Coolidge—wanted an out-of-the-way location for a still. Naturally they looked for his six kids, all girls, to run wild with such a background. Not that Henryton, or Evarts County either, for that matter, upheld Prohibition or admired Andrew Volstead. But buying a so-called half-pint now and then (striking a blow for liberty, the more robust males called it, a trifle shame-facedly) was one thing, and condoning moonshining and bootlegging in their midst was something else again.

Of course moonshining was in the past now. Prohibition had been dead for two years, and people wondered more how Maxill was going to make a living from his worthless land than over his morals. But Nan had been seen necking in automobiles (a Velie and a Rickenbacker) with different boys, and heavens knew on how many unobserved occasions she'd done the same, and honestly, commented Henryton—not to say Evarts County—maybe the juvenile authorities should be notified, because Nan was still underage. Besides, she had a mean, sullen look, defiant and rebellious, that showed she needed a strong hand.

No one thought of going to her father. Everybody knew he kept a loaded shotgun handy (gossips said that was how Muriel—empty chatter—those *lovely* twins) and had run more than one nosy character off his place. Henryton people tended to mind their own business—they had plenty to think about with the Depression—so talk of the authorities, remained just talk. Still, it isolated Nan Maxill more than ever and encouraged her wildness.

He—the fellow; they hadn't any other name for him for a long time; all the Maxills knew who was meant when one of them used the pronoun—was found by Josey in the south pasture, which hadn't been a pasture for years and years, just a hummocky, lumpy expanse of weeds and obstinate brush. Josey was eleven and shy, a birthmark down the left side

of her face was complicated from time to time by almost every possible affliction of the skin, so that she had begun hiding from strangers at the age of seven and never found reason to break the pattern.

She hadn't hidden from him. All her natural childish curiosity about people, long suppressed, overwhelmed by their greedy inquisitiveness over her blemishes, seemed stirred by the sight of him. Though, as everyone said afterward, he didn't really look different. He was oddly dressed, but Henryton had seen boys from Spokane or San Francisco who dressed even more oddly, and his complexion had a peculiar vitality and sheen and at the same time a delicacy which contrasted with those of the farmers accustomed to sun all day, or those who hid in shadowed stores or offices to earn dollars.

"Who're you?" asked Josey. "My dad don't like fellers snooping around. What's your name? Maybe you better get out; he's got a gun and believe me he can use it. What's that stuff you're wearing? Looks like it was your skin, only blue, not something sewed at all. I can sew real good myself; it relaxes me, so I'll probably never be a delinquent. You're not deaf and dumb, are you, Mister? There's a man in Henryton's deaf, dumb *and* blind. People buy pencils from him and drop pennies and nickels in his hat. Say, why don't you say something? My dad'll sure run you off. That's a funny kind of humming. Can you whistle? There's a piece they got a record of in school—I can whistle the whole thing. It's called *Flight of the Bumblebee*. Want to hear me? Like this . . . Gee, you don't need to look so miserable. I guess you just don't like music. That's too bad. I thought when you were humming like that—the way you are now too, and I think it sounds real nice even if you don't like my whistle—you must like music. All us Maxills do. My Dad can play the fiddle better than anybody. . . ."

She told Nan later (because Nan had been the sister who had most to do with taking care of her) he hadn't seemed just not to understand, like a Mexican or something, but acted as though he wouldn't have caught on even if he'd known the meaning of every single word. He came close, still humming, though a different tune if you could call it

that; it was more like snatches of odd melodies. He put his hands—she didn't notice them particularly then—very gently on her face. The touch made her feel good.

He walked with her to the house—it seemed right and natural—with his arm lightly around her shoulder. "He don't talk," she told Nan; "he don't even whistle or sing. Just hums, sort of. Suppose Dad'll run him off. Maybe he's hungry."

"Your face—" began Nan, then swallowed and looked from the child to him. She was in bad humor, frowning, ready to ask what he wanted or tell him sharply to be off. "Go wash your face," she ordered Josey, staring after her as she obediently took down the enameled basin and filled it. The muscles in Nan's cheek relaxed. "Come in," she said to him; "there's a hot apple pie."

He stood there, humming, making no move, smiling pleasantly. Involuntarily she smiled back, though she had been in a mood and the shock of Josey's face was still in her mind. It was hard to tell his age; he didn't look as though he shaved, but there was no adolescent down, and his eyes had mature assurance. She puzzled over the strangely light color; dark and handsome had always been an indivisible word to her, yet she thought them and the pale hair quite exciting.

"Come in," she repeated; "there's a hot apple pie."

He looked at her, at the kitchen behind her, at the unpromising acres over his shoulder. You might have thought he'd never seen such ordinary sights before. She took his sleeve—the feel of it sent prickles through her thumb and fingers as though she'd touched something live instead of inert, touched silk expecting cotton, metal anticipating wood—and pulled him through the door. He didn't hold back or, once inside, seem ill at ease. He merely acted—strange. As though he didn't know a chair was for sitting on or a spoon was for cutting the flaky crust and scooping up the juicy, sticky, drippy filling, or even that the pie was for putting in the mouth, tasting, chewing, swallowing, eating. The horrid thought of mental deficiency crossed her mind, to be dismissed by the sight of him, so unequivocally whole and invulnerable. Still . . .

Josey ran to her. "Nan, Nan— I looked in the mirror! Look at me. My face!"

Nan nodded, swallowing again, glancing swiftly at him and away. "It must have been that last prescription. Or else you're just growing out of it, baby."

"The—the *thing*! It's lighter. Faded."

The birthmark, angry and purple, had receded in size and color. The skin around it was clear and vibrant. Nan put her fingers wonderingly on the smooth cheek and stooped to kiss her sister. "I'm so happy."

He sat there, humming again. Oh, what a silly, Nan thought cheerfully. "Here," she said, in the manner of one addressing an idiot or a foreigner. "Eat. See. Like this. Eat."

Obediently he put the guided spoon of pie into his mouth. She was relieved when he disposed of it normally; she had been afraid she might have to direct each spoonful. At least he didn't have to be fed like a baby. She hesitated a fraction of a second before pouring a glass of milk, feeling small for doing so. She wasn't mean—none of the Maxills were; their faults usually sprang from an excess of generosity—but the cow was drying up, she was a hard one to breed, her father wasn't much of a hand with animals anyway, and the kids needed the milk, to say nothing of the butter Nan preferred to lard for baking. But it would be shameful to grudge—

He had put the glass to his lips, evidently more at home with methods of drinking than of eating, and taken a single sip before sputtering, choking and spitting. Nan was furious, equally at the waste and the manners, until she noticed his hands for the first time. They were strong-looking, perhaps longer than ordinary. On each there was a thumb and three fingers. The three fingers were widely spaced; there was no sign of deformity or amputation. He was simply eight- instead of ten-fingered.

Nan Maxill was a softhearted girl. She had never drowned a kitten or trapped a mouse in her life. She forgot her annoyance instantly. "Oh, poor man!" she exclaimed.

There was no question he must stay and her father must be cozened into allowing it. Ordinary decency—contrary to

Maxill custom—demanded hospitality. And if they let him go, her unsatisfied curiosity would torment her for years. On his part he showed no inclination to leave, continuing to examine each object and person with interest. His humming wasn't monotonous, or tiresome. Though it sounded like no music she had ever heard, it was agreeable enough for her to try to imitate it. She found it deceptively complicated and hard—almost impossible for her to reproduce.

His reaction was enthusiastic surprise. He hummed, she hummed, he hummed back joyously. Briefly the Maxill kitchen echoed a strange, unearthly duet. Then—at least so it seemed to Nan—he was demanding more, far more, than she was able to give. His tones soared away on subtle scales she couldn't possibly follow. She fell silent; after a questioning interval, so did he.

Malcolm Maxill came home in ill-humor. He worked for his son-in-law during the winter and for a month or so in summer; his natural irritation at this undignified role was not lessened by the hardware merchant's insinuations that this employment was in the manner of family charity: who else in Evarts County would hire an ex-bootlegger? Maxill looked to the day he could sell the farm—it was clear of mortgages since it would have been inconvenient in his former profession to have bankers scrutinizing his affairs—and work for himself again. But even good farms were hard to sell in times like these and there were no offers on the eighty acres. More to give an impression to an unlikely prospective buyer that the place had potentialities than in hope of profit, he kept the cow, some pigs and chickens, planted twenty acres or so each spring to corn it never paid to harvest, and looked with disgust on the decayed orchard which was good only for firewood—for which he couldn't get back the cost of cutting.

He stared belligerently at the fellow. "What do you want around here?"

The stranger hummed. Nan and Josey started explaining at the same time. Jessie and Janet begged, "Oh, Daddy, please."

"All right, all right," growled their father. "Let him stay a couple of days if you're all so hot about it. I suppose at

least he can do the chores for his board and maybe cut down a few of those old apple trees. Can you milk?" he asked the fellow. "Huh; forgot he's a dummy. O.K. come along; soon find out whether you can or not."

The girls went with them, Nan carrying the milkpail and tactfully guiding the stranger. Sherry, the cow, was fenced out rather than fenced in: she had the run of the farm except for the cornfield and the scrubby kitchen garden. She was not bedded down in the barn in summer; she was milked wherever she was found. Half-Jersey, half-Guernsey, (and half anybody's guess, Malcolm Maxill said sourly), her milk was rich with cream but it had been too long since she last freshened and the neighboring bulls had never earned their stud fee, though their owners didn't return it when she failed to calve.

Maxill set the pail under Sherry's udder. "Go ahead," he urged, "let's see you milk her." The fellow just stood there, looking interested, humming. "Wouldn't you know it? Can't milk." He squatted down disgustedly, gave a perfunctory brush of his hand against the dangling teats, and began pulling the milk, squit, squit, shish, down into the pail.

The fellow reached out his four-fingered hand and stroked the cow's flank. City man or not, at least he wasn't scared of animals. Of course Sherry wasn't balky or mean; she hardly ever kicked over the pail or swished her tail real hard in the milker's eyes. Still it took confidence (or ignorance) to walk around her left side and touch the bag from which Maxill was drawing, slish, slish, slish, the evening milk.

Nan knew her father was no farmer and that a real one would be milking Sherry only once a day by now, drying her up, since she yielded little more than three quarts. But Maxill knew you were supposed to milk a cow twice a day, just as he knew how long to let mash ferment and he was no chemist either. He went by rules.

"Be darned," exclaimed Maxill, who seldom swore in front of his children. "That's the most she's given in months and I ain't stripped her yet."

The cow's unexpected bounty put him in good humor; he didn't seem to mind slopping the pigs nor the stranger's helplessness at throwing scratch to the chickens. (The girls

usually did this anyway; Maxill's presence was a formality to impress the fellow with the scope and responsibility of the chores.) He ate what Nan had cooked with cheerful appetite, remarking jovially that the dummy would be cheap to feed since he didn't touch meat, butter or milk, only bread, vegetables and water.

Maxill's jollity led him to tune up his fiddle—only Josey and Nan noted the stranger's anguish—and run through *Birmingham Jail*, *Beautiful Doll*, and *Dardanella*. Maxill played by ear, contemptuous of those who had to read notes. Josey whistled (after an apologetic glance), Jessie played her mouth-organ, Janet performed expertly with comb and toilet-paper. "You'd think," grunted Maxill, "with his humming he could give us a tune himself. How about it?" And he offered the fiddle.

The fellow looked at the fiddle as though it were explosive. He put it down on the table as fast as he could and backed away. Nan grieved at this evidence of mental deficiency; Jessie and Janet giggled; Malcolm twirled his finger at his temple; even Josey smiled ruefully.

Then the fiddle began playing. Not playing really, because the bow lay unmoving beside it and the strings didn't vibrate. But music came out of the sound holes, uncertainly at first, then with swelling assurance. It resembled the fellow's humming except that it was infinitely more complicated and moving. . . .

Next morning Maxill took the fellow down to the orchard, the girls tagging along. They weren't going to miss the possibility of more miracles, though now everyone had had a chance to think things over, the Maxills weren't so sure they'd actually heard the fiddle, or if they had, that it hadn't been by some perfectly explicable trick or illusion. Still, if he could seem to make it play without touching it, maybe he could do similar things with the ax.

Maxill hacked at a dead limb. The ax bounded back from the wood. The tree was not diseased or rotten, just old and neglected. Most of the branches were dead but sap still ran in the trunk, as shown by a few boughs on which a handful of fruit had set, and there was new growth on the tips.

Like the rest of the orchard, the tree wasn't worth saving. The ax swung again and again; the branch broke off. Maxill nodded and handed the ax to the fellow.

The fellow hummed, looked at Maxill, the girls, the ax. He dropped the tool and walked over to the tree, fingering the rough bark of the corns, the gnarly outcrop of the roots, the leaves and twigs over his head. Nan halfway expected the tree to rearrange itself into cordwood, neatly split and stacked. Nothing happened, nothing at all.

"Yah! Dummy can't milk, slop pigs, feed chickens or cut wood. If it cost anything to feed him he wouldn't be worth his keep. All he can do is hum and play tricks."

"We'll do the chores this morning," Nan offered tactfully. They did them most mornings, and evenings too, but it was a convention that their father did all the man's work and left them free to concentrate on feminine pursuits. Thoughtful girls, they saved his face.

Nan couldn't believe there was nothing irrevocably wrong with the fellow. He used his eight fingers as dexterously as anyone used ten; more so, it seemed. He wouldn't feed the pigs, but he caught on fast to gathering eggs, reaching under the hens without disturbing them at all. He couldn't milk but he stood by Sherry's side while Nan did. The cow's production was still up; there was a lot more than yesterday morning.

After the chores he returned to the orchard—without the ax. Nan sent Josey to see what he was up to. "He's going to every tree on the place," Josey reported; "just looking at them and touching them. Not doing anything useful. And you know what? He eats grass and weeds."

"Chews on them, you mean."

"No, I don't. He eats them, honest. Handfuls. And he touched my—the thing on my face. I ran right away to look in the mirror, and you can hardly see it in the shade."

"I'm glad it's fading," said Nan. "Only don't be disappointed if it comes back. It's nothing to worry about. And I'm sure his touching you had nothing to do with it. Just coincidence."

It took the fellow three days to go through the orchard, fooling around with every one of the old trees. By the end of

the third day Sherry was giving two full gallons of milk, they were gathering more eggs than usual in the season when laying normally fell off, and Josey's birthmark had practically disappeared, even in full sunlight. Malcolm Maxill grumbled at the fellow's uselessness but he never said straight out that he had to move on, so everything was all right.

After the orchard (the girls went, separately and collectively, to see what he was doing; they returned no wiser) he started on the cornfield. Maxill had planted late, not merely from lack of enthusiasm for husbandry but, possessing no tractor or plow, he had to wait till those who hired out their rigs finished their own sowing. The ground had been dry; the seed had taken overlong to swell and germinate; when the tender gray-green sheaves spiraled through the hard earth, the hot sun had scorched and warped them. While the neighboring fields were already in pale tassel, his dwarfed rows barely revealed the beginning of stunted spikes.

The fellow took even longer with the corn than the orchard. By now Nan realized his humming wasn't tunes at all, just his way of talking. It was a little disheartening, making him seem more alien than ever. If he'd been Italian or Portugee she could have learned the language; if he'd been a Chinaman she could have found out how to eat with chopsticks. A man who spoke notes instead of words was a problem for a girl.

Just the same, after a couple of weeks she began to understand him a little. By this time they were getting four gallons a day from the cow, more eggs than they ever had in early spring, and Josey's complexion was like a baby's. Maxill brought home a radio someone traded in at his son-in-law's store and they had fun getting all sorts of distant stations. When the fellow came close and they weren't tuned in, it played the same kind of music the fiddle had the first night. They were getting used to it now; it didn't seem so strange or even—Malcolm Maxill's words—so long-haired. It made them feel better, stronger, kinder, more loving.

She understood—what? That he was not as other men, born in places with familiar names, speaking familiar speech, doing things in customary ways? All this she knew already.

The humming told her where he came from and how; it was no more comprehensible and relevant afterward than before. Another planet, another star, another galaxy—what were these concepts to Nan Maxill, the disciplinary problem of Henryton Union High, who had read novels in her science class? His name, as near as she could translate the hum, was Ash; what did it matter if he was born on Alpha Centauri, Mars, or an unnamed earth a billion light-years off?

He was humble, conscious of inferiority. He could do none of the things in which his race was so proficient. Not for him were abstract problems insoluble by electronic brains, philosophical speculation reaching either to lunacy or enlightenment, the invention of new means to create or transmute matter. He was, so he admitted and her heart filled the gaps her intellect failed to bridge, a throwback, an atavism, a creature unable to catch the progress of his kind. In a world of science, of synthetic foods and telekinesis, of final divorce from the elementary processes of nature, he had been born a farmer.

He could make things grow—in a civilization where that talent was no longer useful. He could combat sickness—in a race that had developed congenital immunity to disease. His gifts were those his species had once needed; they had outgrown the need a million generations back.

He did not pour out his confusion to Nan in a single steady flow. Only as he acquired words and she began to distinguish between his tones did their communication reach toward comprehension. Even when he was thoroughly proficient in her language and she could use his crudely, there remained so much beyond her grasp. He explained patiently over and over the technique of controlling sounds without directly touching the instrument as he had done with the fiddle and radio; she could not follow him. What he had done to Josey's face might as well have been expounded in Sanskrit.

It was still more impossible for her to envision the ways in which Ash was inferior to his fellows. That his humming—any music he produced—so beguiling and ethereal to her, was only a dissonance, a childish babble, a lisping, stut-

tering cacophony, was preposterous. Spaceships she could imagine, but not instantaneous transmission of unharmed living matter through a void millions of parsecs across.

While they learned from each other the corn ripened. This was no crop to plow under or let blacken with mildew in the field. The blighted sheaves now stood head-high, the broad leaves sickling gracefully downward, exposing and protecting the two ears on every stalk. And what ears they were! Twice as long and twice as fat as any grown in Evarts County within memory, full of perfect kernels right to the bluntly rounded tips, without a single dry or wormy row. The county agricultural agent, hearing rumors, drove over to scotch them; he walked through the field for hours, shaking his head, mumbling to himself, pinching his arm. Maxill sold the crop for a price that was unbelievable, even with the check in his hand.

The meager scattering of fruit ripened. Since the coming of Ash, the trees had sent forth new wood at a great rate. Young leaves hid the scars of age: the dead wood thrusting jaggedly, nakedly upward, the still-living but sterile boughs. Under the lush foliage the girls discovered the fruit. Ash's touch had been too late for the cherries, apricots, plums, early peaches, though those trees were flourishing in their new growth with abundant promise for the coming year. But the apples, pears and winter peaches were more astonishing than the corn.

There were few; nothing could have added new blossoms, fertilized them, or set the fruit, but the few were enormous. The apples were large as cantaloupes, the pears twice the size of normal pears, the peaches bigger than any peach could be. (Maxill exhibited specimens at the County Fair and swept all the first prizes.) They were so huge everyone assumed they must be mealy and tasteless, easily spoiled. Juice spurted from them at the bite, their flesh was firm and tangy, their taste and plumpness kept through the winter.

Nan Maxill faced the problem. Ash was properly a gift to all the people of the world. There was none who couldn't learn from him; all would benefit by what they learned. Scientists could understand what she couldn't; piece together

the hints of matters above Ash's own head. The impetus he could give to technology would make the fifteenth and nineteenth centuries seem stagnant periods. Musicians and philologists could be pushed to amazing discoveries. Farmers could benefit most of all. Under his guidance dead sands and unused spaces would be rich with food; many if not all wars might be avoided. To keep him on the farm in Evarts County would be cheating humanity.

Against all this what could she set? The prosperity of the Maxills? Her growing attachment to Ash? The threat of her father selling the farm—easy enough now—and seeing the money spent until they were worse off than ever? She would have been stupid or foolish not to have considered these things. But the picture that pushed all others aside was that of Ash on the rack, victim of polite, incredulous inquisitors.

They wouldn't believe a word he said. They'd find the most convincing reasons for disregarding the evidence of the corn, the fruit, the untouched fiddle. They would subject him to psychiatric tests: intelligence, co-ordination, memory; physical tests—every possible prying and prodding. Where was he born, what was his full name, who were his father and mother? Unbelieving, refusing to believe, but so politely, gently, insistently: Yes, yes of course, we understand; but try and think back, Mr. Uh Er Ash. Try to recall your childhood. . . .

And when they finally realized, it would be worse, not better. Now this force, Mr. Ash—try to remember how. . . . This equation; surely you can. . . . We know you practice telekinesis, just show us. . . . Again, please. . . . Again, please. . . . About healing sores, please explain. . . . Let's go through that revival of dying plant life once more. . . . Now about this ultrachromatic scale. . . . Now this, now that.

Or suppose it wasn't that way at all? Suppose the peril to Ash wasn't the apelike human greed for information but the tigerish human fear and hate of the stranger? Arrest for illegal entry or whatever they wanted to call it, speeches in Congress, uproar in newspapers and over the air. Spy, saboteur, alien agent. (How do we know what he's done to what he grows? Maybe anybody who eats it will go crazy or not be able to have babies.) There were no means of

deporting Ash; this didn't mean he couldn't be gotten rid of by those terrified of an invasion of which he was the fore-runner. Trials, legal condemnation, protective custody, lynchers . . .

Uncovering Ash meant disaster. Two hundred years earlier or later he could bring salvation. Not now. In this age of fear, the revelation of his existence would be an irreparable mistake. Nan knew her father wouldn't be anxious to tell who was responsible for his crops; Gladys and Muriel knew nothing except that they had a hired man who was somewhat peculiar; anyway they wouldn't call themselves to the attention of Evarts County in any controversial light. The younger kids could be trusted to follow the example of their father and sisters. Besides, she was the only one in whom Ash had confided.

That winter Maxill bought two more cows. Ancient, dry and bony, destined for the butcher's where they would have brought very little. Under Ash's care they rejuvenated from day to day, their ribs vanished beneath flesh, their eyes brightened. The small, slack bags emerged, rounded, swelled, and eventually hung as full of milk as though they had just calved.

"What I want to know is, why can't we do as much for the pigs?" he demanded of Nan, ignoring, as always except when it suited him, Ash's presence. "Hogs are way down; I could get me some bred sows cheap. He could work his hocus-pocus—I can just see what litters they'd have."

"It isn't hocus-pocus. Ash just knows more about these things than we do. And he won't do anything to help killing," Nan explained. "He won't eat meat or eggs or milk himself—"

"He did something to make the hens lay more. And look at the milk we're getting."

"The more the hens lay the farther they are from the ax. The same goes for the cows. You notice nothing's improved the young cockerels. Maybe it isn't that he won't; maybe he can't do anything to get animals ready to be eaten. Ask him."

The seed catalogues began coming. Maxill had never bothered with the truck garden beyond having it plowed for

the girls to sow and tend. This year he treated each pamphlet like a love letter, gloating over the orange-icicle carrots, impudent radishes, well-born heads of lettuce on the glistening covers. Nan intercepted his rhapsody of cabbages bigger than pumpkins, watermelons too heavy for a man to lift unaided, succulent tomatoes weighing three pounds or more apiece.

And Ash was content. For the first time Nan felt the double-edged anger of women toward both exploiter and exploited. Ash ought to have some self-respect, some ambition. He oughtn't be satisfied puttering around an old farm. With his abilities and the assurance of a superior among primitives he could be just about anything he wanted. But of course all he wanted was to be a farmer.

Maxill couldn't wait for the ground to be ready. While it was still too wet he had it plowed. Badly and at extra cost. He planted every inch of the fifty-odd available acres, to the carefully concealed amusement of his neighbors who knew the seed would rot.

Nan asked Ash, "Can you control whatever it is you do?"

"I can't make pear trees bear cucumbers or a grapevine have potatoes on its roots."

"I mean, everything doesn't have to be extra big, does it? Can you fix it so the corn is only a little bigger than usual?"

"Why?"

Nan Maxill knew the shame of treason, as she tried to explain.

"You're using words I don't know," said Ash. "Please define: jealousy, envy, foreigner, competition, furious, suspicion and—well, begin with those."

She did the best she could. It wasn't good enough. It wasn't nearly good enough. Nan, who had been outraged at Ash's banishment, began to see how one too far behind or too far ahead might become intolerable. She could only guess what Ash represented to his people—a reminder of things better forgotten, a hint that they weren't so advanced as they thought when such a one could still be born to them—but she knew what he was on earth in the year 1937: a reproach and a condemnation.

Spring winds snapped the dead wood on the fruit trees, pruning them as efficiently as a man with saw, shears and snips. The orchard could not be mistaken for a young one, the massive trunks and tall tops showed how long they had been rooted, but it was unquestionably a healthy one. The buds filled and opened, some with red-tipped unspoiled leaves, others with soft, powdery, uncountable blossoms. The shade they cast was so dense no weeds grew between the trees.

Not so in the fields. Whatever Ash had done to the soil also affected the windblown seeds lighting in and between the furrows. They came up so thickly that stem grew next to stem, roots tangled inextricably, heads rose taller and taller, reaching for unimpeded sunlight. Unless you got down on hands and knees the tiny green pencils were invisible under the network of weeds.

"Anyways," said Malcolm Maxill, "the darned things came up instead of rotting; that's going to make some of the characters around here look pretty sick. I'll have a crop two-three weeks ahead of the rest. Depression's over for the Maxills. Know what? We'll have to cultivate like heck to get rid of the weeds; I'm going to get us a tractor on time. Then we won't have to hire our plowing next year. Suppose he can learn to run a tractor?"

"He can," said Nan, ignoring Ash's presence as completely as her father. "But he won't."

"Why won't he?"

"He doesn't like machinery."

Maxill looked disgusted. "I suppose he'd be happy with a horse or a mule."

"Maybe. He still wouldn't turn the weeds under."

"Why the dickens not?"

"I've told you before, Father. He won't have anything to do with killing."

"Weeds?"

"Anything. There's no use arguing; that's the way he is."

"Darn poor way if you ask me." But he bought the tractor and many attachments for it, cultivating the corn, sweating and swearing (when the girls were out of earshot); cursing

Ash who did no more about the farm than walk around touching things. Was that a way to earn a grown man's keep?

Nan was afraid he might have a stroke when he found out the mammoth products of the year before were not to be duplicated. The orchard bore beyond all expectation or reason, not a cherry, plum or apricot was undersized, misshapen or bird-pecked. No blossom fell infertile, no hard green nubbin withered and dropped, no set fruit failed to mature. Branches bent almost to the ground under the weight of their loads; breezes twitched leaves aside to uncover briefly a pomologist's dream. Maxill was no more pleased than by the corn.

"Sacrificing quality for quantity," he growled. "Bring the top market price? Sure. I was counting on twice that."

Nan Maxill realized how much she herself had changed, or been changed, since the fellow came.

Her father seemed to her now like a petulant child, going into a tantrum because something he wanted—something she saw wasn't good for him—was denied. The boys she used to go out with were gluttonous infants, gurgling and slobbering their fatuous desires. The people of Henryton, of Evarts County, of—no, she corrected herself—people; people were juvenile, adolescent. News on the radio was of wars in China and Spain, massacre and bestialities in Germany, cruelties and self-defeat all over the world.

Had she unconsciously acquired Ash's viewpoint? He had no viewpoint, passed no judgments. He accepted what was all around him as he accepted what she told him: reflectively, curiously, puzzledly, but without revulsion. She had taken the attitude she thought *ought* to be his, unable to reach his detachment as he was unable to reach that of those who had exiled him here, as one who cannot distinguish between apes would put a gorilla and chimpanzee in the same zoo cage.

As primitive characteristics were sloughed off, a price was paid for their loss. Ash's people had exchanged his ability to make things grow for a compensatory ability to create by photosynthesis and other processes. If Ash had

lost the savage ability to despise and hate, had he also lost the mitigating ability to love?

Because she wanted Ash to love her.

They were married in January, which some thought odd, but the season suited Nan who wanted a "regular" wedding and at the same time a quiet one. She had expected her father's assent at least; Ash had made him prosperous in two short years; their marriage would be insurance that he would continue to do so. But Maxill's bank account, his big car, the new respect Henryton—including his son-in-law—gave him, had inflated his ideas. "Who is the fellow anyway?" he demanded. "Where'd he come from originally? What's his background?"

"Does all that matter? He's good and gentle and kind, where he came from or who his parents were doesn't change that."

"Oh, doesn't it? Maybe there's bad blood in him. Bound to come out. And he's a cripple and not right in the head besides. Why, he couldn't even talk like anybody else at first. Sure it matters: you want kids who turn out idiots with the wrong number of fingers? Maybe criminals too?"

Nan neither smiled at his passion for respectability nor reminded him that her children would have a moonshiner and bootlegger for a grandfather. "Ash is no criminal."

Ash was no criminal, but what of other dangers? Not just children with the wrong number of fingers or differences she knew nothing of (she'd never dare let Ash be examined by a doctor for fear of what anatomical or functional differences might be revealed), but perhaps no children at all. Beings so different might well have sterile union. Or no carnal union at all. Perhaps no bond deeper than that of a man for a cat or horse. Nan didn't pretend for a second it wouldn't matter. It mattered terribly, every last perilous possibility. She was still determined to marry him.

Maxill shook his head. "There's another thing—he hasn't even got a name."

"We'll give him ours," said Nan. "We'll say he's a second cousin or something."

"Hell we will!" her father exploded. "A freak like that—"

"All right. We'll elope then, and get a place of our own. It won't be hard when anyone sees what Ash can do. And we won't have to have good land." She left it at that, giving him plenty of time to think over all the implications. He gave in. Grudgingly, angrily. But he gave in.

Ash had never gone into Henryton or showed himself except the few times he'd helped Maxill pay back a debt of work. Still everyone knew there was some sort of hired man on the farm. Gladys and Muriel knew him to nod to and that was about all; they were skeptically astonished to learn he was a remote relative "from back East" and still more amazed to hear he was marrying Nan. They thought she could do better. Then they remembered her reputation; maybe they should be glad the fellow was doing right. They counted the months and were shocked when a year and a half went by before Ash Maxill junior was born.

Nan had counted the months too. Some of her fears had been quickly dispelled, others persisted. She feared to look closely at her son, and the fear was not mitigated by Ash's expression of aloof interest nor the doctor's and nurses' over-bright cheeriness. Her insides settled back into place as she delicately touched the tiny nose, unbelievably perfect ears, rounded head. Then she reached to lift the wrapping blanket—

"Uh . . . uhh . . . Mrs. Maxill, uh . . ."

She knew of course even before she saw them, and a great wave of defiance flowed through her. The little dimpled hands, the little rectangular feet—eight fingers, eight toes.

She wanted to shout, It's not an impediment, you idiots! Why do you need five fingers when four will do the same things more easily and skillfully, and do things no five-fingered hand will do? It wasn't physical weakness which kept her quiet—she was a strong, healthy girl and the birth had not been complicated—but the knowledge that she must hide the child's superiority as she hid Ash's lest the ordinary ones turn on them both. She hid her face. Let them think it was anguish.

She felt a curious sympathy for her father. Malcolm Maxill was triumphant; his dire prophecies had been fulfilled; he could not restrain his gratification. At the same time it was his grandson—his flesh and blood—who was deformed. Short of betraying Ash's secret she had no way of reassuring him and even this might not console him. More than likely he would take Ash's banishment as further proof of undesirability; he did not try to hide his increasing animosity.

"You'd think," said Nan, "you'd injured him instead of doing all you have."

Ash smiled and ran his hand lightly over her shoulder. It still surprised her slightly that someone without anger, envy or hate should be capable of humor and tenderness.

"Do you expect him to be grateful?" he asked. "Have you forgotten all you told me about how people act? Anyway, I didn't do it for your father but for the sake of doing it."

"Just the same, now the baby is here, we ought to have a regular agreement. Either a share in the farm or else wages—good wages."

She knew his look of grave and honest interest so well. "Why? We have all we can eat. Your clothes wear out but your father gives you money for new ones, and the baby's too. Why—"

"Why don't your clothes wear out or get dirty?" she interrupted irrelevantly.

He shook his head. "I don't know. I told you I didn't understand these things. Until I came here I never heard of fabrics which weren't everwearing and self-cleaning."

"Anyway it doesn't matter. We ought to be independent."

He shook his head. "Why?"

Malcolm Maxill used some of the money from the bountiful crop of 1940 to buy the adjoining farm. He was indisputably a big man in Evarts County now. Three laborers worked the two farms; the house had been remodeled; a truck, two cars and a station wagon stood in the new garage beside all the shining machinery. The banker in Henryton

listened deferentially when he spoke; Muriel's husband asked his advice.

Nan saw how it chafed him to be tied to farming, beholden to Ash. When he left on the long trip to Los Angeles she knew he was trying to end his dependence, searching for a deal to put him in a business where his shrewdness, money, energy, not Ash's gifts, would make the profit. Maxill wasn't mean; if he sold the land she was sure he'd settle with Ash for enough so they could get a place of their own.

A freeway accident intervened: Malcolm Maxill was killed instantly. There was no will. The estate was divided amicably enough, Gladys and Muriel waiving practically all their share in return for Nan's taking full responsibility for the three younger girls. Ash was quite content to leave arrangements—which he regarded with the detached interest an Anglican bishop might take in a voodoo mask—to her. He clearly didn't grasp the importance of possessions and power.

He had to register for the draft but as a father in an essential occupation there was little danger of being called up; anyway he would never pass a medical examination with eight fingers. The war sent farm prices up and up; Gladys went to Washington to work for the government; Josey married a sailor home on leave.

Harvests continued bountiful, Nan noted with pleasure how other farmers came to Ash for advice and help. Since he couldn't convey his knowledge to her despite partial communication in his own tongue there was no use trying with others. He never refused his aid; he simply limited it to visiting the poor growth, sick animal or doubtful field, talking platitudes from agricultural bulletins while his hands were busy. Afterward, so naturally that they were only amazed at the wisdom of the trite advice, the beasts recovered, the crop flourished, the sterile ground bore.

Her faint fear of little Ash's hands becoming a handicap after all was dissipated. He could grasp, clutch, hold, manipulate, throw better than any other child of his age. (Some years later he became the best pitcher Evarts County had

ever known; he had a facing curve no opposing batter ever caught onto.) Without precocity he talked early; he learned his father's speech so well he eventually outdistanced Nan; she listened with maternal and wifely complacency as they hummed subtleties beyond her understanding.

Jessie, who took a commercial course, got a job as her brother-in-law's secretary; Janet went East to study archaeology. After V-J Day, price-controls went off; the Maxills made more and more money. Ash stopped planting corn on the old farm. Part of the acreage he put into a new orchard, on the rest he sowed a hybrid grass of his own breeding which yielded a grain higher in protein than wheat. Young Ash was a joy; yet after seven years he remained an only child. "Why?" she asked.

"You want more children?"

"Naturally I do. Don't you?"

"It's still hard for me to understand your people's obsession with security. Security of position, ancestry or posterity. How is it possible to differentiate so jealously between one child and another because of a biological relation or the lack of it?"

For the first time Nan felt him alien. "I want *my* children."

But she had no more. The lack saddened without embittering her; she remembered how she had been bent on marrying Ash even with the chance of no children at all. And she had been right: without Ash the farm would have been worthless; her father a whining, querulous, churlish failure; she would have married the first boy who asked her after she tired of necking in cars, and would have had a husband as incapable of helping her grow and bloom as her father had been incapable with his barren acres. Even if she had known there would be no young Ash, she would still have chosen the same way.

It troubled her that Ash was unable to teach his son his farming skill. It destroyed a dream of Nan's: Ash's secret made him vulnerable; young Ash, with no secret to be extracted, could have worked his miracles for humanity without fear.

"Why can't he learn? He understands you better than I ever will."

"He may understand too much. He may have advanced beyond me. Remember, I'm a throwback, with faculties no longer needed by my people. Sports rarely breed true; he may be closer to them in some ways than I."

"Then . . . then he should be able to do some of the marvelous things they can do."

"I don't think it works that way. There's some kind of equation—not a mechanical leveling off, but compensatory gains and losses. I can't teach him even the simple sort of telekinesis I can do. But he can heal flesh better than I."

So a new dream supplanted the old: young Ash as a doctor, curing the diseases mankind suffered. But the boy, happy enough to exorcise warts from a playmate's hands or mend a broken bone by running his fingers over the flesh outside, wanted no such future. The overriding interest of his life was machinery. At six he had rehabilitated an old bicycle each Maxill girl had used in turn until it was worn beyond repair. Beyond any repair except young Ash's, that is. At eight he restored decrepit alarm clocks to service, at ten he could fix the tractor as well or better than the Henryton garage. Nan supposed she ought to be happy about a son who might be a great engineer or inventor; unfortunately she thought the world of freeways and nuclear weapons less desirable than the one she had known as a girl—Prohibition and Depression or not.

Could she be aging? She was just over forty; the fine lines on her face, the slight raising of the veins on her hands were far less noticeable than the same signs on girls—women—five or six years younger. Yet when she looked at Ash's smooth cheeks, unchanged since the day Josey brought him in from the south pasture, she had a qualm of apprehension.

"How old are you?" she asked him. "How old are you really?"

"As old and as young as you are."

"No," she persisted. "That's a figure of speech or a way of thinking. I want to know."

"How can I put it in terms of earth years—of revolutions

around this sun by this planet? It wouldn't make sense even if I knew the mathematics involved and could translate one measurement into another. Look at it this way: wheat is old at six months, an oak is young at fifty years."

"Are you immortal?"

"No more than you. I'll die just as you will."

"But you don't grow any older."

"I don't get sick either. My body isn't subject to weakness and decay the way my remote ancestors' were. But I was born, therefore I must die."

"You'll still look young when I'm an old woman. Ash..."

Ah, she thought, it's well enough for you to talk. What people say doesn't bother you; you aren't concerned with ridicule or malice. I'd call you inhuman if I didn't love you. Every superhuman carries the suggestion of inhumanity with it. Yes, yes—we're all selfish, mean, petty, grasping, cruel, nasty. Are we condemned for not seeing over our heads, for not being able to view ourselves with the judicial attachment of a million generations hence? I suppose we are. But it must be a self-condemnation, not an admonition, not even the example of a superior being.

She could not regret marrying Ash; she would not have changed anything. Except the one pitiful little resentment against aging while he didn't. No acquired wisdom, no thoughtful contemplation could reconcile her to the idea, could prevent her shuddering at the imagined looks, questions, snickers at a woman of fifty, sixty, seventy, married to a boy apparently in his twenties. Suppose young Ash had inherited his father's impervious constitution, as he seemed to have? She saw, despite the painful ludicrousness of it, her aged self peering from one to the other, unable to tell instantly which was the husband and which the son.

In her distress, and her soreness that she should be distressed, she drew off from the others, spoke little, spent hours away from the house, wandering in a not unpleasant abdication of thought and feeling. So, in the hot, sunny stillness of an August afternoon, she heard the music.

She knew immediately. There was no mistaking its relation to Ash's humming and its even closer kinship to the

polyphony he drew from the radio. For a vanishing instant she thought, heart-beatingly, that young Ash—but this was far far beyond fumbling experiment. It could only come from someone—something—as far ahead of Ash as he was of her.

She listened, shocked, anguished, exhaled. There was nothing to see except the distant mountains, the cloudless sky, ripe fields, straight road, groups of slender trees, scrabbly knots of wild berries, untrammelled weeds. Nothing hovered overhead, no stranger in unearthly clothes strolled from behind the nearest hillock. Yet she had no doubt. She hurried back to the house and found Ash. "They are looking for you."

"I know. I've known for days."

"Why? What do they want?"

He did not answer directly. "Nan, do you think I've completely failed to fit into this life?"

She was genuinely astonished. "Failed! You've brought life, wisdom, health, goodness to everything you've touched. How can you talk of failing?"

"Because, after all . . . I haven't become one of you."

"Add, 'Thank God.' You've done much more than become one of us. You've changed the face and spirit of everything around here. The land and those who live off it are better because of you. You changed me from a silly girl to—to whatever I am. You fathered young Ash. Don't ask me if a spoonful of sugar sweetens the ocean—let me believe it makes it that much less salt."

"But you are unhappy."

She shrugged. "Happiness is for those satisfied with what they have and want nothing more."

He asked, "And what do you want?"

"A world where I wouldn't have to hide you," she answered fiercely. "A world you and young Ash and his children and grandchildren could better without inviting suspicion and envy. A world outraged—not happy—with bickering, distrust, animosity and terror. I think you've brought such a world a little closer to becoming."

He said abruptly, "They want me back."

She heard the four words without comprehension; they

conveyed no message to her. She searched his face as though the expression would enlighten her. "What did you say?"

"They want me back," he repeated. "They need me."

"But that's outrageous! First they send you to this savage world, then they decide they've made a mistake and whistle for you to come back."

"It isn't like that," protested Ash. "They didn't force me; I didn't have to accept the suggestion. Everyone agreed, on the basis of the very little we knew, that the people and society here (if either existed) would most likely be closer to the epoch I would naturally have fitted than the one into which I was born. I needn't have come; having come, I could have returned."

"Force! What do you call the pressure of 'everyone agreed' if not force? And it was for your own good too. That excuse for wickedness must prevail from one end of the universe to the other. I wonder if your people are really less barbarian than mine."

He refused to argue, to defend the beings who threatened—if vainly—the life she led with her husband and son, the minute good Ash was doing in Evarts County, the hope that he could do more and on a larger scale. Ash in his humility thought them superior to him; she had never questioned this till now. But suppose their evolution had not been toward better than the development Ash represented, but worse—a subtle degeneracy? Suppose in gaining the abilities so awesome to Ash they had lost some of his probity and uprightness, reverting to a morality no higher—little higher, she amended in all honesty—than that of the earth in the year 1960?

"Of course you won't go?"

"They need me."

"So do I. So does young Ash."

He smiled tenderly at her. "I will not weigh the need of millions, nor the need of love and comfort against the need for life. Such judgments lead only to self-justification, cruelty disguised as mercy, and destruction for the sake of rebuilding."

"Then you won't go?"

"Not unless you tell me to."

Next day she walked through the orchard, recalling again its desolate condition before Ash came, Josey's face, her own unsettled heart. She walked through the new orchard where the young trees flourished without a twisted limb or fruitless branch. She walked through the new farm, never so hopeless as the homeplace, yet abused, exploited, ravaged. The fields were fair and green, the pasture lush and succulent. She came to the spot where she had been the day before and the music filled her ears and mind.

Fiercely she tried to recapture her reasoning, her indictment. The music did not plead, cajole, argue with her. It was itself, outside such utility. Yet it was not proud or inexorable; removed from her only in space and time and growth; not in fundamental humanity. It was far beyond the simple components of communication she had learned from Ash, yet it was not utterly and entirely outside her understanding.

She listened for a long time—hours, it seemed. Then she went to the house. Ash put his arms around her and again, as so often, she was amazed how he could be loving without a tincture of brutality. "Oh, Ash," she cried. "Oh, Ash!"

Later she said, "Will you come back?"

"I hope so," he answered gravely.

"When—when will you go?"

"As soon as everything is taken care of. There won't be much; you have always attended to the business matters." He smiled; Ash had never touched money or signed a paper. "I'll take the train from Henryton; everyone will think I've gone East. After a while you can say I've been kept by family affairs. Perhaps you and the boy will leave after a few months, presumably to join me."

"No. I'll stay here."

"People will think—"

"Let them," she said defiantly. "Let them."

"I can find you anywhere, you know, if I can come back."

"You won't come back. If you do you'll find me here."

She had no difficulties with the harvest. As Ash said, she had taken care of the business end since her father's death.

Hands were always eager to work at the Maxill's; produce merchants bid against each other for the crop. But next year?

She and the land could wither together without a husband's care. The lines on her face would deepen, her hair would gray, her mouth sag. The trees would die little by little, the fruit grow sparser, less and less perfect. The corn would come up more irregularly year by year, sickly, prey to parasites; stunted, gnarled, poor. Finally so little would grow it wouldn't pay to plant the fields. Then the orchards would turn into dead wood, the hardier weeds take over, the land become waste. And she . . .

She knew she was hearing the sounds, the music, only in her imagination. But the illusion was so strong, so very strong, she thought for the moment she could distinguish Ash's own tones, his message to her, so dear, so intimate, so reassuring. . . .

"Yes," she said aloud. "Yes, of course."

Because at last she understood. In the winter she would walk all over the land. She would pick up the hard clods from the ground and warm them in her fingers. In the spring she would plunge her arms into the sacks of seed, deeply, to the elbows, over and over. She would touch the growing shoots, the budding trees; she would walk over the land, giving herself over to it.

It would not be as though Ash were still there. It could never be like that. But the earth would be rich; the plants and trees would flourish. The cherries, apricots, plums, apples and pears would not be as many or so fine as they had been, nor the corn so even and tall. But they would grow, and her hands would make them grow. Her five-fingered hands.

Ash would not have come for nothing.

SOMETHING INVENTED ME

by R. C. Phelan

from The Reporter

1960 was the year for breakthroughs and breakdowns in communications. The most dramatic to my mind (after "Ozma") was the device called the "People-Machine" built by an outfit called *Simulmatics, Inc.*, the machine is a conventional IBM 704, but programmed with a—sensationally—unconventional "mathematical model of the United States electorate," distilled from thousands of pollsters' files. Designed by a Director of Columbia's Bureau of Applied Social Research and a Yale psychologist, the machine's first job was for the Democratic campaign committee in the Presidential election.

Meanwhile, Cornell researchers were teaching another electronic brain how to read. The "Perceptron" is designed with "electrical counterparts of eyes, nerve fibers, and nerve cells," to enable it to read and use ordinary language, instead of mathematical codes. During the same year, the Air Force put a new type of IBM to work translating technical works from Russian into English.

All this might have been happier news had it not coincided with a rash of metal-wig-flipping by Brains already in use: wrong scoring in college tests, for instance, and a hilarious series of goofs in a robotized Providence, R. I., post office. Tends to make one wonder if we may not be "building in" more parallels with the human brain than we intended?

Tom Trimble and I have been next-door neighbors all our lives, though our houses are six miles apart. We run adjoining ranches in that part of Texas where cedar, prickly pear, and prairie dogs are the chief nuisances and, in a dry year, twenty-five acres of land are needed to support a single cow. When we were boys and our fathers owned the ranches, they were friends, as Tom and I were.

They shared only one thing: the cost of bringing a tutor down from the North each year to teach Tom and me through the winter. One year the tutor stayed at our house, the next year with the Trimble's. The specialties of these young men varied—one was mathematical, one was historical, and several of them were literary.

A ranch is a big and sparsely furnished place, where a boy's imagination gets a hard workout. A good supply of books is much appreciated and used. For a year or two, in our teens, Tom and I agreed that we would very likely become great writers. Our literary tutors encouraged us.

Because riding twelve miles a day on horseback was a bore, I used to stay for weeks at the Trimble's house when the tutor was there, and the next year Tom would stay with us. We kept in touch with our families over the party-line telephone, receiving instructions and reporting on our behavior. We liked this arrangement all the better since, as host and guest, we could get out of more work than we could alone on the separate ranches.

Sometimes we liked to show off before our elders by discussing learned matters with the tutor in a man-to-man way. Or, if we chose, we could easily show off before *him* by outriding him or speaking border Spanish with the cowhands. Tom and I were completely at home in any level of the ranch society. At sixteen and seventeen we rode high, the masters of every situation. But at eighteen we were sent off to the University of Texas, where we discovered a big, bewildering new world. We went different ways in it, and our friendship melted slowly, like a snowman, keeping its form for a long time but shrinking. Before we were graduated, a wildcatter, drilling three hundred yards south of the Trimble's dipping vat, brought in a flowing well of oil. To this day no oil has been discovered on my family's land.

Tom and I joined different services in the war. Returning with our wives, we settled down on the ranches. My father had died of a heart attack in 1944, and my mother was glad to hand over to me the job of managing the ranch.

Events had made Tom's problems simpler than mine. His father had been murdered in a political plot. His mother had allowed every drop of crude oil to be pumped out of

the Trimble wells and piped away. There remained only some vast empty spaces far beneath the surface of the ranch, and twenty-three million dollars of oil money in San Angelo banks. There had been twenty-four million, but Tom's mother, a sweet, quiet woman, had returned to Natchez to marry her high-school sweetheart, now a widower in the cotton business. She had taken with her a make-up case containing a million dollars in cash and had left all the rest, along with the ranch, to her son.

But the ranch now had no water. Once the oil wells were pumped out, the water wells had gone dry on their own. Tom merely bought water a hundred miles to the east, and built a pipeline that brought it to his cows and his household plumbing.

On my mother's ranch we had no oil, but we did have water. Our postwar problems were not much different from those of the 1930's. In good years we had money in the bank, and in bad years we owed money to the bank, and either way our mode of life was the same. Small cattlemen live like that.

Tom, with his millions, lived differently. His first wife bore him a daughter, built an addition to the ranch house that was twice as big as the original structure, and divorced him. His second wife, a movie star, added a swimming pool and more guest suites to the house, and adopted three children.

His third wife was a sadly smiling, alcoholic beauty six years older than Tom. She stayed the longest, and while she was there they entertained so elaborately that they needed all the facilities the first two wives had installed, plus more housing for the staff. Tom sent his big plane to New York or Hollywood for weekend guests.

In those years the strongest connection between the two ranches was the old party-line telephone, though it was rarely used. Once or twice a year Tom phoned to invite Anne and me to one of his parties. Once or twice we went, and then we gave up going. We had seen the expenditure and had been impressed, and there was nothing else. We were content to sit on our own porch on Sunday evenings and hear, diminished by six miles of Western silence,

the throb of engines as planes took off, bearing guests home to Hollywood, New Orleans, or Cuernavaca.

Eventually the decay of her beauty drove the third wife from drink to madness, and she was shut up in a private institution. The parties stopped; Tom lived alone. He trimmed his staff of cooks, gardeners, pilots, mechanics, and maids, until there remained only a few people to care for him and his cattle. And after a year of living in this solitude, Tom published a novel.

It was called *Early Noon*, and was a study of a Scottish family on a Peruvian plantation in the 1880's. Many reviewers called it first-rate, and when I read it I agreed with them. It was so thorough, so surely based on a lifetime knowledge of time and place, that it convinced me that Tom was a kind of genius. I wondered if he had got his knowledge from drugged dreams. He was not Scottish and had never been to Peru. He could hardly have bought the novel for cash, as he bought his water, his house, and his guests, because no one who wrote like that would stoop to ghostwriting. I decided that Tom himself had done the work.

One day not long ago my wife called me to the phone. "It's Tom," she said.

"Can you come over?" he asked quietly. His request alarmed me. I understood that he meant *right now*. He had not telephoned in more than a year.

I got into my little plane and, flying low, followed the old horse trail and the telephone line beside it. (It is possible to drive from my ranch to Tom's, but the trip takes more than an hour.) From the air, the wings, pools, terraces, and garages that Tom's wives had added to the original house looked like a jumble of movie sets of different scales and periods. Landing on Tom's big paved strip, I taxied my little plane up to the old house, which turns its back to the recent additions and faces open country.

Tom was sitting on the old front porch, drinking Scotch. We are both thirty-eight now, but he looks younger than that, and younger than I. A rancher looks competent and calm, even in a bad year; being boss gives him that. But Tom had added to his calm the arrogance, the elegance, all the last refinements that money can confer, and had ended

up in indifference and boredom. Still he was an impressive sight in his rancher's clothes and boots and British grooming. His eyes looked tired.

Drinking, we talked about cattle for a while. We watched a vapor trail that seemed to create itself as an invisibly distant bomber drew it in the sky. When the long white stroke had blurred, Tom asked, "Have you read my book?"

"Yes."

"I didn't write it."

"Who did?"

"Nobody. It's a long story. That's why I asked you to come—I want to tell you.

"You know things have gone badly for me since the war. The ranch doesn't support me; I support it. Guests have come and gone for years, yet often I feel that in all that time I haven't spoken to another person. Laura lives now in a specially created environment, but the world they arrange for her pleasure in the sanitarium is no more artificial than the one I live in.

"I have been bored; tortured with boredom. So I decided to look back over my life until I found an ambition somewhere—or even just a good intention—and pick it up again and carry it out. The best thing I could find was my old resolve to be a writer. Do you remember when we used to talk about it?"

"Yes."

"Well, I bought a typewriter and sat in front of it for weeks. Nothing happened. Or rather, the inevitable happened. Sitting there, empty as a drum, I began to figure out how money could be converted even into talent—or anyway into an imitation of it.

"Do you remember the old theory about putting ten monkeys to work at ten typewriters, just hitting the keys at random? The argument was that if you kept them at it a million years they would write the complete works of Shakespeare. Along with trillions of pages of gibberish, of course. It was a question of mathematical probability—sooner or later, in a million years, one of the monkeys would just *happen* to hit the keys in the sequence that would produce *Hamlet*, and another would do *Lear*, and so on.

"But monkeys are old-fashioned and too slow; now we have electrons. Every time a new calculating machine appears, somebody announces that it can solve in thirty seconds problems that would require seven years of figuring with pencil and paper. Or something like that. And this is possible because the work is done by streams of electrons moving along wires at the speed of light.

"The problem, then, was simple: change the work of the electrons from calculating to typing. In effect, devise an automatic typewriter that would race along, completely out of control, at maybe a million words a minute. With no mind to guide it, the thing would produce staggering mountains of nonsense, but would, by the laws of probability, make sense a tiny fraction of the time."

"And you actually did it," I said.

"Well, I had it done. In New York I found a man to put the machine together—a fellow named David R. Sere. He worked for I.B.M., designing computers. I hired him away from them and brought him here. I outlined the problem to him in New York. He chose the components he thought he would need and rode with them in a freight car all the way to San Angelo. He slept beside them on a cot, the way a kid sleeps by his bull at the Fat Stock Show."

"Then you have the thing here?"

"Yes. Want to see it?"

He led me through the old house and into a wing that had been built by his second wife, Alicia. We entered the enormous living room. Its curtains were closed; Tom pressed the wall switch and the room was filled with soft, rich light that some decorator had contrived to make women beautiful and parties successful. The furniture had been pushed back to the walls. Tom's machine stretched along the center of the rug like a procession of stunted mechanical elephants, linked trunk to tail. For it consisted of several gray metal cabinets with a minimum of lights and switches and no dials at all, connected by many wires of different colors. I listened but heard no sound.

"Is it working?" I asked.

"Yes."

(Later, bending over it, I heard a hum like that of a

forgotten radio whose station has signed off for the night—the very sound of emptiness. It was the only noise the thing made.)

"It's not quite what I expected," I told him. "You know—in cartoons you see big cabinets with rows of lights."

"The problem was different here. See this little one on the end?" It was a box less than three feet high. "It's the smallest unit, but it does the basic work. The other components are simply devices for getting the stuff out to the light of day."

He led me to the little cabinet—the creative one. "This is where electronic impulses, each representing a different word, are mixed at random. Even David Sere doesn't know how fast it works—it may turn out a billion words of mixture an hour, or maybe only a million. It isn't like a typewriter, after all. It makes the mixture from words, not letters.

"We could have put the entire Unabridged Dictionary into its vocabulary, but then we would have gotten back prose with such odd words as 'sope,' 'paktong,' and 'thir' in it, and I didn't want that. In the end we gave it a generous English vocabulary and a few tags of French, German, and Latin."

Tom touched the second cabinet. "This is the scanner. Producing the mixture is simple, but it takes lots of wires and circuits and stuff to scan the mixture and know when it ceases to be gibberish and starts making sense. Other parts of the scanner fill the basement and three bedrooms upstairs. Sere spent months 'instructing' it—adjusting the mechanism to accept sense-making combinations of words and reject nonsense.

"When the scanner accepts part of the mixture as sensible English, it diverts the electron stream into this cabinet, which is called Memory. Memory is simply a recording device, necessary because there is no process that can print the stuff as fast as the machine produces it. Memory stores it, then feeds it out slowly—still as nothing but a code and electron pattern—to the next component, which converts the code into English and prints it on microfilm.

"Every morning I snip off a bit of microfilm and de-

velop it myself. The output ranges from six to ten inches of film a day. I have a little darkroom over there. Then I sit down at an ordinary microfilm viewer to see what the machine has written."

"And that's it?" I asked.

"That's it. That's how I produced my novel."

We returned to the front porch. Tom poured Scotch over ice cubes and added pipeline water. It was near sunset now. The air had cooled a degree or two and even the horned frogs were casting shadows. Some of Tom's calves began bellowing, at a distance that turned the sounds to music.

"How many people know that a machine wrote *Early Noon*?" I asked.

"Three. You and I and David R. Sere. But I don't worry about Sere, he's perfectly safe—hardly human at all. I laid down specifications for him, and then went out and found him—in Manhattan, of course. He took me to a health-food shop on Sixth Avenue, and over nuts and raisins and spinach juice he told me that his lifelong ambition had been just to sit somewhere and think. Well, he's doing it now—in a furnished room in Bayonne, New Jersey, at my expense."

I asked, "Why did you send for me?"

"The machine has written another novel. I have just finished typing it out—I can't very well send microfilm off to my publisher, and it would be risky to hire the typing done. The thing is, this new novel is so different from *Early Noon* that I'm not sure I can offer it as my work. I want you to read it and tell me if you think I can get away with it. I hope you think I can, because this new one is my masterpiece."

"Is that thing set to write nothing but novels?" I asked.

"No, no, damn it," said Tom with irritation. "You don't understand. It works at random. It can write *anything*. That's the trouble—most of its output is useless to me. It has done a complete *Julius Caesar*, for example—and thirty of the Sonnets. It has produced several letters of application for the job of school-bus driver in Wyandotte, Ohio, in 1933. It has made dozens of dirty limericks, and has actually invented a new vice by describing it in a story."

It has written the diary of a sixteen-year-old moron named Artie Messer for the year 1967.

"It has given me thousands of things I can't use!" He shouted the last two words and ground an ice cube to bits with his teeth, making me wince. "Want ads! Soldiers' letters home! Contracts!

"Contracts! Hundreds of pages of aforesaid and whereases, and I have to read it all because I never know when the damned machine will switch to another subject. Once it did five chapters of a novel I would like to have written, and then switched to a recipe for spoon bread in the style of Clementine Paddleford.

"Three months ago it produced a lost comedy of Aristophanes in an English translation by Gilbert Murray. Murray died in 1957. Now, is this a *real* lost comedy of Aristophanes? Or is the play itself, like the Murray translation of it, just an invention of the machine?

"I have no way of knowing. The *Julius Caesar* is real, and the Wyandotte, Ohio, letters are false—there's no such town. But real or false, the Aristophanes is great and ought to be added to world literature. Yet how can I arrange an authentic-looking situation in which to re-discover it?"

He shrugged and smiled. "It isn't easy," he said. "If I could write at all, I could do my own stuff in less time than it takes to read all the junk the machine produces.

"I could stop, I guess. Just throw the switch and quit; take up chess, or travel. But there's a fascination to it. It's the biggest thing I've ever been involved in—Shakespeare, Aristophanes, new works of real importance coming out of infinity, out of nowhere. I like being a famous writer. So I go on reading, day after day."

"Where is the new manuscript?"

"Over there." He indicated a manila envelope on the porch floor.

"When I read *Early Noon*," I said, "I felt in touch with a first-rate mind. I was surprised and a little jealous that the first-rate mind was yours. But it was not yours—I was touched and moved by a random pattern of electrons made by a machine. No mind was involved at all?"

"No. They can do that sort of thing nowadays," said Tom.

It was dark. I phoned Anne and asked her to turn on the lights along one of our fences which guide me to a landing in our pasture. Then I said good night to Tom and flew home with his manuscript. The next afternoon I took it to my office and began to read.

The novel was new and strange. Its events took place in the United States and in the present day, yet reading it was like entering a new country where the trees, birds, and stones were different from any known before. It took the old threads of the English language and wove them into something fine and new. Like Tom, I thought it a masterpiece. But I was worried, almost frightened, by the fact that it wasn't real.

In the late afternoon I switched on a light, noting that I would have to join Anne and my mother for a drink soon or they would wonder what was wrong. But just at that moment I grew puzzled. I turned back and reread a page. Then, making an exultant guess as to what I had discovered, I put down the manuscript and went to join my family.

After dinner I returned to the novel and read it to the end, and knew that I had guessed right. *The machine had left the book unfinished.* Tom had completed the twelfth chapter himself, and added three more. His real reason for asking me to read the book was not to get my opinion of its style but to see whether I could tell the difference between the machine's work and his imitation of it.

I read Tom's chapters again, savoring his ineptitude. I imagined his rage as, peering into his microfilm viewer with tired eyes, he saw this golden stream cut off, replaced by something trivial or stupid. I imagined, too, his agony in writing those final chapters, bad as they were.

The next morning I flew again to Tom's house. He came out to the landing strip to meet me. Climbing out of my little plane, holding his manuscript in my hand, I walked toward him. I arranged on my face a knowing, smiling, cynical look that would tell him I had guessed his secret.

And Tom was walking toward me. Behind him the sky

dropped to a flat horizon forty miles away. We were two tiny figures on an enormous windy world, approaching each other on a concrete prairie where grass had grown for thousands of years but grew no more. Like me, Tom held a manuscript. He looked at me fearfully, with far more knowledge in his eyes than I held in mine.

"I know," he said. "The machine wrote this yesterday." He handed me his manuscript. I read the first lines of it, and the pale arch of the sky turned to stone. Fear stabbed me like a pin going through a specimen. I did not know whether I had just been created or was about to be destroyed. I only knew that some fearful power had reached down from the sky and trapped us. For the opening words of the machine's latest work were these:

"Tom Trimble and I have been next-door neighbors all our lives, though our houses are six miles apart. We run adjoining ranches in that part of Texas where cedar, prickly pear, and prairie dogs are the chief nuisances and, in a dry year, twenty-five acres of land are needed to support a single cow. . . ."

A SIGH FOR CYBERNETICS

by Felicia Lamport

from *Harper's Magazine* and "Scrap Irony",
(Houghton Mifflin, 1961)

Dr. Norbert Wiener, a pioneer in the use of electronic brains, warns that computing machines, now working faster than their inventors, may go out of control and cause widespread destruction.—*News Item*

Thinking machines are outwitting their masters,
Menacing mankind with ghastly disasters.

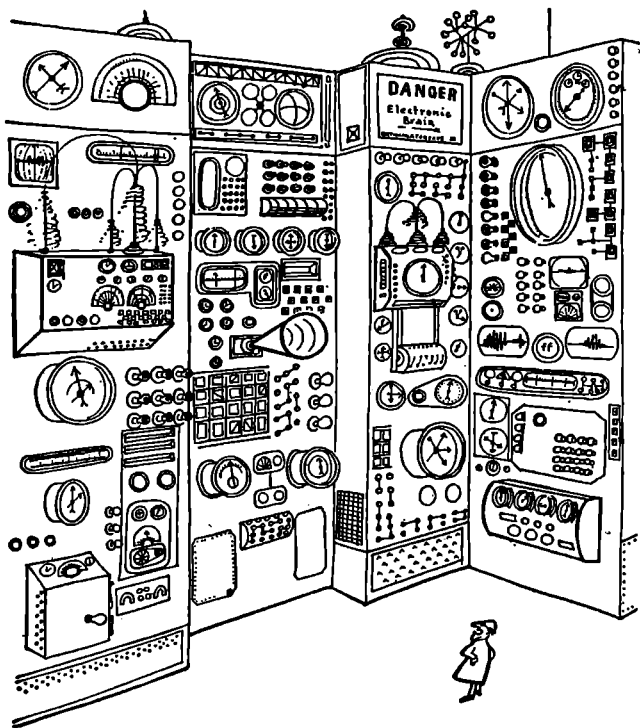
These mechanized giants designed for compliance
Exhibit their open defiance of science

By daily committing such gross misdemeanors
That scientists fear they'll make mincemeat of Wieners.

OBVIOUS!

by Michael Ffolkes

from *Punch*



'What d'you mean—'obvious to the meanest intelligence!'

I REMEMBER BABYLON

by Arthur C. Clarke

from Playboy

To build the better mousetrap has become—in this day of technological marvels—the easiest part of the job. It's getting the word to the path-beating public that really counts. And the path itself tends to resemble a nightmare behaviorist's maze (to switch rodents and metaphors) in which all the entrances are through opinion-taking and all the exits by way of opinion-making.

This was never so evident as in the year that began with the TV quiz scandals, progressed with "payola" and "public images," and included the launchings of the "Echo" and "Courier" satellites, advance scouts of moon-relayed worldwide no-fail radio, telephone and television communication.

No one is better qualified than Arthur Clarke to write about the possibilities inherent in the Echo program: world-traveler, cosmopolite, and lecturer of note, Fellow of the Royal Astronomical Society, and past President of the British Interplanetary Society, Mr. Clarke is the very model of a modern major science-fictionist. In addition to a quantity of superior fiction (see Harcourt Brace's 1959 omnibus collection, *Across the Sea of Stars*), he has written both technical and popular books on space flight, at least one vividly descriptive book on skin diving in Australian coral reefs, and any number of short articles. Between lecture seasons, space conferences, underwater explorations, and appearances before House Investigations Committees, he makes his home in Ceylon.

My name is Arthur C. Clarke, and I wish I had no connection with the whole sordid business, but as the moral—repeat, moral—integrity of the United States is involved, I must first establish my credentials. Only thus will you un-

derstand how, with the aid of the late Dr. Alfred Kinsey, I have unwittingly triggered an avalanche that may sweep away much of western civilization.

Back in 1945, while a radar officer in the Royal Air Force, I had the only original idea of my life. Twelve years before the first Sputnik started beeping, it occurred to me that an artificial satellite would be a wonderful place for a television transmitter, since a station several thousand miles in altitude could broadcast to half the globe. I wrote up the idea the week after Hiroshima, proposing a network of relay satellites 22,000 miles above the equator; at this height, they'd take exactly one day to complete a revolution, and so would remain fixed over the same spot on the Earth.

The piece appeared in the October 1945 issue of *Wireless World*; not expecting that celestial mechanics would be commercialized in my lifetime, I made no attempt to patent the idea, and doubt if I could have done so anyway. (If I'm wrong, I'd prefer not to know.) But I kept plugging it in my books, and today the idea of communication satellites is so commonplace that no one knows its origin.

I did make a plaintive attempt to put the record straight when approached by the House of Representatives Committee on Astronautics and Space Exploration; you'll find my evidence on page 32 of its report, *The Next Ten Years in Space*. And as you'll see in a moment, my concluding words had an irony I never appreciated at the time: "Living as I do in the Far East, I am constantly reminded of the struggle between the western world and the U.S.S.R. for the uncommitted millions of Asia. . . . When line-of-sight TV transmissions become possible from satellites directly overhead, the propaganda effect may be decisive. . . ."

I still stand by those words, but there were angles I hadn't thought of—and which, unfortunately, other people have.

It all began during one of those official receptions which are such a feature of social life in eastern capitals. They're even more common in the west, of course, but in Colombo there's little competing entertainment. At least once a week, if you are anybody, you get an invitation to cocktails at an embassy or legation, the British Council, the U.S. Opera-

tions Mission, L'Alliance Française, or one of the countless alphabetical agencies the UN has begotten.

At first, being more at home beneath the Indian Ocean than in diplomatic circles, my partner and I were nobodies and were left alone. But after Mike godfathered Dave Brubeck's tour of Ceylon, people started to take notice of us—still more so when he married one of the island's best-known beauties. So now our consumption of cocktails and canapés is limited chiefly by reluctance to abandon our comfortable sarongs for such western absurdities as trousers, dinner jackets and ties.

It was the first time we'd been to the Soviet Embassy, which was throwing a party for a group of Russian oceanographers who'd just come into port. Beneath the inevitable paintings of Lenin and Stalin, a couple of hundred guests of all colors, religions and languages were milling around, chatting with friends, or single-mindedly demolishing the vodka and caviar. I'd been separated from Mike and Elizabeth, but could see them at the other side of the room. Mike was doing his "There was I at fifty fathoms" bit to a fascinated audience, while Elizabeth watched him quizzically, and more people watched Elizabeth.

Ever since I lost an eardrum while pearl diving on the Great Barrier Reef, I've been at a considerable disadvantage at functions of this kind; the surface noise is about 6 db too much for me to cope with. And this is no small handicap, when being introduced to people with names like Dharmasirawardene, Tissaverasinghe, Goonetilleke and Jayawickrame. When I'm not raiding the buffet, therefore, I usually look for a pool of relative quiet where there's a chance of following more than fifty percent of any conversation in which I may get involved. I was standing in the acoustic shadow of a large ornamental pillar, surveying the scene in my detached or Somerset Maugham manner, when I noticed that someone was looking at me with that "Haven't we met before?" expression.

I'll describe him with some care, because there must be many people who can identify him. He was in the mid-thirties, and I guessed he was American; he had that well-scrubbed, crew-cut, man-about-Rockefeller-Center look

that used to be a hallmark until the younger Russian diplomats and technical advisers started imitating it so successfully. He was about six feet in height, with shrewd brown eyes and black hair, prematurely gray at the sides. Though I was fairly certain we'd never met before, his face reminded me of someone. It took me a couple of days to work it out: remember John Garfield? That's who it was, as near as makes no difference.

When a stranger catches my eye at a party, my standard operating procedure goes into action automatically. If he seems a pleasant enough person, but I don't feel like introductions at the moment, I give him the Neutral Scan, letting my eyes sweep past him without a flicker of recognition, yet without positive unfriendliness. If he looks a creep, he receives the *coup d'oeil*, which consists of a long, disbelieving stare followed by an unhurried view of the back of my neck; in extreme cases, an expression of revulsion may be switched on for a few milliseconds. The message usually gets across.

But this character seemed interesting, and I was getting bored, so I gave him the Affable Nod. A few minutes later he drifted through the crowd and I aimed my good ear toward him.

"Hello," he said (yes, he *was* American), "my name's Gene Hartford. I'm sure we've met somewhere."

"Quite likely," I answered, "I've spent a good deal of time in the States. I'm Arthur Clarke."

Usually that produces a blank stare, but sometimes it doesn't. I could almost see the IBM cards flickering behind those hard brown eyes, and was flattered by the brevity of his access time.

"The science writer?"

"Correct."

"Well, this is fantastic." He seemed genuinely astonished. "Now I know where I've seen you. I was in the studio once, when you were on the Dave Garroway show."

(This lead may be worth following up, though I doubt it; and I'm sure that "Gene Hartford" was phony—it was too smoothly synthetic.)

"So you're in TV?" I said. "What are you doing here—collecting material, or just on vacation?"

He gave me the frank, friendly smile of a man who has plenty to hide.

"Oh, I'm keeping my eyes open. But this really is amazing; I read your *Exploration of Space* when it came out back in, ah—"

"1952; the Book-of-the-Month Club's never been quite the same since."

All this time I had been sizing him up, and though there was something about him I didn't like, I was unable to pin it down. In any case, I was prepared to make substantial allowances for someone who had read my books and was also in TV; Mike and I are always on the lookout for markets for our underwater movies. But that, to put it mildly, was not Hartford's line of business.

"Look," he said eagerly. "I've a big network deal cooking that will interest you—in fact, *you* helped to give me the idea."

This sounded promising, and my co-efficient of cupidity jumped several points.

"I'm glad to hear it. What's the general theme?"

"I can't talk about it here, but could we meet at my hotel, around three tomorrow?"

"Let me check my diary; yes, that's O.K."

There are only two hotels in Colombo patronized by Americans, and I guessed right first time. He was at the Mount Lavinia, and though you may not know it, you've seen the place where we had our private chat. Around the middle of *The Bridge on the River Kwai*, there's a brief scene at a military hospital, where Jack Hawkins meets a nurse and asks her where he can find Bill Holden. We have a soft spot for this episode, because Mike was one of the convalescent naval officers in the background. If you look smartly you'll see him on the extreme right, beard in full profile, signing Sam Spiegel's name to his sixth round of bar-chits. As the picture turned out, Sam could afford it.

It was here, on this diminutive plateau high above the miles of palm-fringed beach, that Gene Hartford started to unload—and my simple hopes of financial advantage

started to evaporate. What his exact motives were, if indeed he knew them himself, I'm still uncertain. Surprise at meeting me, and a twisted feeling of gratitude (which I would gladly have done without) undoubtedly played a part, and for all his air of confidence he must have been a bitter, lonely man who desperately needed approval and friendship.

He got neither from me. I have always had a sneaking sympathy for Benedict Arnold, as must anyone who knows the full facts of the case. But Arnold merely betrayed his country; no one before Hartford ever tried to seduce it.

What dissolved my dream of dollars was the news that Hartford's connection with American TV had been severed, somewhat violently, in the early Fifties. It was clear that he'd been bounced out of Madison Avenue for Party-lining, and it was equally clear that his was one case where no grave injustice had been done. Though he talked with a certain controlled fury of his fight against asinine censorship, and wept for a brilliant—but unnamed—cultural series he'd had kicked off the air, by this time I was beginning to smell so many rats that my replies were distinctly guarded. Yet as my pecuniary interest in Mr. Hartford diminished, so my personal curiosity increased. Who *was* behind him? Surely not the BBC . . .

He got round to it at last, when he'd worked the self-pity out of his system.

"I've some news that will make you sit up," he said smugly. "The American networks are soon going to have some real competition. And it will be done just the way you predicted; the people who sent a TV transmitter behind the Moon can put a much bigger one in orbit round the Earth."

"Good for them," I said cautiously. "I'm all in favor of healthy competition. When's the launching date?"

"Any moment now. The first transmitter will be parked due south of New Orleans—on the equator, of course. That puts it way out in the open Pacific; it won't be over anyone's territory, so there'll be no political complications on that score. Yet it will be sitting up there in the sky in full view of everybody from Seattle to Key West. Think of it—

the only TV station the whole United States can tune into! Yes, even Hawaii! There won't be any way of jamming it; for the first time, there'll be a clear channel into every American home. And J. Edgar's Boy Scouts can't do a thing to block it."

So that's your little racket, I thought; at least you're being frank. Long ago I learned not to argue with Marxists and Flat-Earthers, but if Hartford was telling the truth I wanted to pump him for all he was worth.

"Before you get too enthusiastic," I said, "there are a few points you may have overlooked."

"Such as?"

"This will work both ways. Everyone knows that the Air Force, NASA, Bell Labs, I.T.&T. and a few dozen other agencies are working on the same project. Whatever Russia does to the States in the propaganda line, she'll get back with compound interest."

Hartford grinned mirthlessly.

"Really, Clarke!" he said (I was glad he hadn't first-named me). "I'm a little disappointed. Surely you know that the States is years behind in payload capacity! And do you imagine that the old T.3 is Russia's last word?"

It was at this moment that I began to take him very seriously. He was perfectly right. The T.3 could inject at least five times the payload of any American missile into that critical 22,000-mile orbit—the only one that would deliver a satellite apparently fixed above the Earth. And by the time the U.S. could match that performance, heaven knows where the Russians would be. Yes, Heaven certainly *would* know. . . .

"All right," I conceded. "But why should fifty million American homes start switching channels just as soon as they can tune into Moscow? I admire the Russian people, but their entertainment is worse than their politics. After the Bolshoi, what have you? And for me, a little ballet goes a long, long way."

Once again I was treated to that peculiarly humorless smile. Hartford had been saving up his Sunday punch, and now he let me have it.

"You were the one who brought in the Russians," he

said. "They're involved, sure—but only as contractors. The independent agency I'm working for is hiring their services."

"That," I remarked dryly, "must be some agency."

"It is; just about the biggest. Even though the States tries to pretend it doesn't exist."

"Oh," I said, rather stupidly. "So *that's* your sponsor."

I'd heard those rumors that the U.S.S.R. was going to launch satellites for the Chinese; now it began to look as if the rumors fell far short of the truth. But how far short, I'd still no conception.

"You are so right," continued Hartford, obviously enjoying himself, "about Russian entertainment. After the initial novelty, the Nielsen rating would drop to zero. But not with the programs I'm planning. My job is to find material that will put everyone else out of business when it goes on the air. You think it can't be done? Finish that drink and come up to my room. I've a highbrow movie about ecclesiastical art that I'd like to show you."

Well, he wasn't crazy, though for a few minutes I wondered. I could think of few titles more carefully calculated to make the viewer switch channels than the one that flashed on the screen:

ASPECTS OF THIRTEENTH CENTURY TANTRIC SCULPTURE.

"Don't be alarmed," Hartford chuckled, above the whirl of the projector. "That title saves me having trouble with inquisitive Customs inspectors. It's perfectly accurate, but we'll change it to something with a bigger box-office appeal when the time comes."

A couple of hundred feet later, after some innocuous architectural long-shots, I saw what he meant. . . .

You may know that there are certain temples in India, covered with superbly executed carvings of a kind that we in the west scarcely associate with religion. To say that they are frank is a laughable understatement; they leave nothing, to the imagination—*any* imagination. Yet at the same time they are genuine works of art. And so was Hartford's movie.

It had been shot, in case you're interested, at the Temple of the Sun, Konarak. "An awkward place to reach," Hart-

ford told me, "but decidedly worth the trouble." I've since looked it up; it's on the Orissa coast, about twenty-five miles northeast of Puri. The reference books are pretty mealy-mouthed; some apologize for the "obvious" impossibility of providing illustrations, but Percy Brown's *Indian Architecture* minces no words. The carvings, it says primly, are of "a shamelessly erotic character that have no parallel in any known building." A sweeping claim, but I can believe it after seeing that movie.

Camera work and editing were brilliant, the ancient stones coming to life beneath the roving lens. There were breathtaking time-lapse shots as the rising sun chased the shadows from bodies intertwined in ecstasy; sudden startling close-ups of scenes which at first the mind refused to recognize; soft-focus studies of stone shaped by a master's hand in all the fantasies and aberrations of love; restless zooms and pans whose meaning eluded the eye until they froze into patterns of timeless desire, eternal fulfillment. The music—mostly percussion, with a thin, high thread of sound from some stringed instrument that I could not identify—perfectly fitted the tempo of the cutting. At one moment it would be languorously slow, like the opening bars of Debussy's *L'Après-midi*; then the drums would swiftly work themselves up to a frenzied, almost unendurable climax. The art of the ancient sculptors, and the skill of the modern cameraman, had combined across the centuries to create a poem of rapture, an orgasm on celluloid which I would defy any man to watch unmoved.

There was a long silence when the screen flooded with light and the lascivious music ebbed into exhaustion.

"My God!" I said, when I had recovered some of my composure. "Are you going to telecast *that*?"

Hartford laughed.

"Believe me," he answered, "that's nothing; it just happens to be the only reel I can carry round safely. We're prepared to defend it any day on grounds of genuine art, historic interest, religious tolerance—oh, we've thought of all the angles. But it doesn't really matter; no one can stop us. For the first time in history, any form of censorship's become utterly impossible. There's simply no way of enforc-

ing it; the customer can get what he wants, right in his own home. Lock the door, switch on the TV set to our—dare I call it our blue network?—and settle back. Friends and family will never know.”

“Very clever,” I said, “but don’t you think such a diet will soon pall?”

“Of course; variety is the spice of life. We’ll have plenty of conventional entertainment; let *me* worry about that. And every so often we’ll have information programs—I hate that word propaganda—to tell the cloistered American public what’s really happening in the world. Our special features will just be the bait.”

“Mind if I have some fresh air?” I said. “It’s getting stuffy in here.”

Hartford drew the curtains and let daylight back into the room. Below us lay that long curve of beach, with the outrigger fishing boats drawn up beneath the palms, and the little waves falling in foam at the end of their weary march from Africa. One of the loveliest sights in the world, but I couldn’t focus on it now. I was still seeing those writhing stone limbs, those faces frozen with passions which the centuries could not slake.

That slick voice continued behind my back.

“You’d be astonished if you knew just how much material there is. Remember, we’ve absolutely no taboos. If you can film it, we can telecast it.” He walked over to his bureau and picked up a heavy, dog-eared volume. “This has been my bible,” he said, “or my Sears, Roebuck, if you prefer. Without it, I’d never have sold the series to my sponsors. They’re great believers in science, and they swallowed the whole thing, down to the last decimal point. Recognize it?”

I nodded; whenever I enter a room, I always monitor my host’s literary tastes. “Dr. Kinsey, I presume.”

“I guess I’m the only man who’s read it from cover to cover, and not just looked up his own vital statistics. You see, it’s the only piece of market research in its field. Until something better comes along, we’re making the most of it. It tells us what the customer wants, and we’re going to supply it.”

“All of it? Some people have odd tastes.”

"That's the beauty of the movie you just saw—it appeals to just about every taste."

"You can say that again," I muttered.

He saw that I was beginning to get bored; there are some kinds of single-mindedness that I find depressing. But I had done Hartford an injustice, as he hastened to prove.

"Please don't think," he said anxiously, "that sex is our only weapon. Exposé is almost as good. Ever see the job Ed Murrow did on the late sainted Joe McCarthy? That was milk and water compared with the profiles we're planning in *Washington Confidential*.

"And there's our *Can You Take It?* series, designed to separate the men from the milksops. We'll issue so many advance warnings that every red-blooded American will feel he has to watch the show. It will start innocently enough, on ground nicely prepared by Hemingway. You'll see some bullfighting sequences that will really lift you out of your seat—or send you running to the bathroom—because they show all the little details you never get in those cleaned-up Hollywood movies.

"We'll follow that with some really unique material that cost us exactly nothing. Do you remember the photographic evidence the Nürnberg war trials turned up? You've never seen it, because it wasn't publishable. There were quite a few amateur photographers in the concentration camps, who made the most of opportunities they'd never get again. Some of them were hanged on the testimony of their own cameras, but their work wasn't wasted. It will lead nicely into our series *Torture Through the Ages*—very scholarly and thorough, yet with a remarkably wide appeal. . . .

"And there are dozens of other angles, but by now you'll have the general picture. The Avenue thinks it knows all about Hidden Persuasion—believe me, it doesn't. The world's best *practical* psychologists are in the east these days. Remember Korea, and brainwashing? We've learned a lot since then. There's no need for violence any more; people enjoy being brainwashed, if you set about it the right way."

"And you," I said, "are going to brainwash the United States. Quite an order."

"Exactly—and the country will love it, despite all the screams from Congress and the churches. Not to mention the networks, of course. They'll make the biggest fuss of all, when they find they can't compete with us."

Hartford glanced at his watch, and gave a whistle of alarm. "Time to pack," he said. "I've got to be at that unpronounceable airport of yours by six. There's no chance, I suppose, that you can fly over to Macao and see us sometime?"

"Not a hope; but I've got a pretty good idea of the picture now. And incidentally, aren't you afraid that I'll spill the beans?"

"Why should I be? The more publicity you can give us, the better. Although our advertising campaign doesn't go into top gear for a few months yet, I feel you've earned this advance notice. As I said, your books helped to give me the idea."

His gratitude was quite genuine, by God; it left me completely speechless.

"Nothing can stop us," he declared—and for the first time the fanaticism that lurked behind that smooth, cynical façade was not altogether under control. "History is on our side. We'll be using America's own decadence as a weapon against her, and it's a weapon for which there's no defense. The Air Force won't attempt space piracy by shooting down a satellite nowhere near American territory. The FCC can't even protest to a country that doesn't exist in the eyes of the State Department. If you've any other suggestions, I'd be most interested to hear them."

I had none then, and I have none now. Perhaps these words may give some brief warning before the first teasing advertisements appear in the trade papers, and may start stirrings of elephantine alarm among the networks. But will it make any difference? Hartford did not think so, and he may be right.

"History is on our side." I cannot get those words out of my head. Land of Lincoln and Franklin and Melville, I love you and I wish you well. But into my heart blows a cold wind from the past; for I remember Babylon.

THE LAGGING PROFESSION

by Leonard Lockhard

from Analog Science Fact & Fiction

Readers of previous S-F annuals will remember Theodore L. Thomas's "The Far Look" and "Satellite Passage" particularly for the vivid personal realism of his near-future portraits of man in space. Mr. Thomas, who first trained as a chemical engineer and now practices law as a patent attorney, started his writing career under the pseudonym of Leonard Lockhard, and still uses that by-line for his series of humorous-instructive tales about the patent pursuits of Mr. Saddle and Mr. Spardleton.

In the introduction to "I Remember Babylon," I made a point of the real-life elements involved in the story. Obviously this is just as true of "Leonard Lockhard's" piece. Both authors are trained scientists as well as first-rate storytellers. Both are writing here about the same (genuine) idea of Mr. Clarke's concerning the television satellite which has been so much discussed in the past year (and may have become a reality by the time this reaches print). But it is important to remember that of these two pieces, only one is fact-written-like-fiction. The other is fiction-written-like-fact.

Early morning was the best part of the day in the offices of Helix Spardleton, Esquire, patent attorney extraordinary, and this particular morning in February, 1960, was no exception. Susan, our secretary, made the coffee, and she, Mr. Spardleton, and I sat around and drank it while Mr. Spardleton went through the morning's mail. We talked of many things, but mostly we listened to Mr. Spardleton's comments as he opened letters and packages and journals and circulars. Many of the letters were from the United States Patent Office informing us that the patent applica-

tions we had filed for our inventors were incomplete or too vague or too broad or too indefinite or were otherwise defective, and in any case the subject matter was clearly unpatentable over a host of prior patents which showed our inventions with such clarity that an eight-year-old child could understand them. Those Office Actions could break the heart of a sincere inventor unless he understood that such conduct was just part of the normal give-and-take of patent practice. With few exceptions, the Primary Examiners considered it necessary to reject all the claims in a patent application the first time around no matter how good the invention.

I always enjoyed listening to Mr. Spardleton's remarks about the various absurd Actions of the Patent Office. "Look at this one. He cites wood pulp patents against us when all our claims cover asbestos fibers and have nothing to do with cellulosic fibers. He's wasting our time, his time, and the taxpayers' money. We'll give him a short answer with sarcastic overtones. And look at this. In this one we claim a dielectric heater and the Examiner cites against us patents dealing with inductive heating; he doesn't know the difference between a fluctuating field and a fluctuating current. Oh my, they don't make scientific lawyers the way they used to."

He took a sip of coffee and opened some junk mail without comment. He placed it on the pile farthest to his left, the one that Susan simply dropped into the wastebasket.

Mr. Spardleton opened another Office Action and glanced at it. He nodded and said, "Hm-m-m," under his breath. He looked up at me and said, "Mr. Saddle, you seem to have filed a patent application for Dr. Marchare claiming a laminated wall panel that supplies both heat and light, and also serves as a heat sink. That right?"

I had to think for a moment. I had filed so many Marchare applications that I sometimes lost track. Then I remembered. That panel was going to revolutionize the building industry in the United States. "Sure," I said. "It takes the place of all interior walls at a price so cheap you—"

"Did you by any chance check any of the published ar-

ticles relating to structures that will be used under the airless conditions encountered out in space?"

"Why, I don't remember that I did. I don't see what that has—"

"Well, the Examiner here says that your structure is just like the one described in a published article—a new kind of domed structure for use on the Moon and other airless sites. The Examiner may have something here; he seems to have written a good Action. Let's see." He looked at the name at the end of the page, on the left side, and he nodded. "I might have known. Herbert Krome. Well, you'll have fun getting this one through." He put the Action on the pile that was to come to me, and picked up the next piece of mail.

"Well," he said. "Speaking of space, we seem to have a letter from Mr. Arthur C. Clarke. You've heard of him, I presume?"

Susan and I nodded. "Yes," I said. "I've read two of his novels. What's he writing to us for? Copyright problems?"

By this time Mr. Spardleton had the letter open and was glancing down it. "It looks like we have a new client. Mr. Clarke has a patent problem, and he wants to talk to us about it. He says he believes he is the first to conceive of the twenty-four-hour satellite and its use in communications. He wants to know if we can take out a patent on it for him. He'll be in to see us next week."

Susan beat me to the question. "What kind of satellite?"

"The twenty-four-hour satellite. It completes one revolution around the earth every twenty-four hours, which means that it is motionless overhead with respect to a point on the surface of the earth; the earth revolves once every twenty-four hours too. Well, such a satellite would make an excellent relay station for television signals. Mr. Clarke says here that with three twenty-four-hour satellites spaced one hundred twenty degrees apart in a plane around the earth, a television signal can be beamed from any place on the earth's surface to any other place without worrying about cables or line-of-sight problems. He wants us to patent the arrangement for him. Well, Mr. Saddle, what do you think?"

I had been working with Mr. Spardleton for eight years. I had learned in that time that I must be ready to answer some pretty interesting questions without any time for reflection. Mr. Spardleton always said that a patent attorney must be ready to answer questions by instinct; often there is no time to think. This kind of mental reflex action is necessary when arguing cases before the various tribunals. For instance, in arguing before the Board of Appeals, any of the three members might have had a bad breakfast that morning and begin tossing questions at the attorney. The same thing can happen before the United States Court of Customs and Patent Appeals, except there are five judges to contend with instead of three. I sometimes think judges never eat breakfast.

Anyway, when Mr. Spardleton popped the question to me I instinctively answered, "Oh, I think something patentable can be worked up for a concept such as that. After all, it has all the elements of patentability required by 35 U.S.C. 101 and 102." This is one of the stunts I have learned—always go back to the statutes. Judges are always quoting the statutes, and it behooves an attorney to behave as the judges behave. Besides, when you quote a statute, other people have to stop and think about it. This gives you time to think.

Mr. Spardleton nodded soberly. "Very good, Mr. Saddle. Just how would you write a patent claim for such an invention?" As he spoke Mr. Spardleton took the wrapper off a cigar. When he finished speaking he placed the cigar in his mouth, lit it, and blew great clouds of smoke toward the ceiling. The working day had started. Susan got up and collected the cups and saucers and coffee things, and went out of the office. That left me with a claim to talk about.

"Well," I said. "A process claim would be quite easy. Let's see. It could go: a method of transmitting television signals around the earth—"

"Why only television signals?" Mr. Spardleton said.

I nodded and tried again. "A method of transmitting radio and television signals around the earth—"

"Why only radio and television signals?"

I nodded and tried again. "A method of transmitting elec-

tromagnetic radiation from one point to another on the earth's surface without the need for cables and the like which comprises transmitting said radiation to a satellite in orbit around the earth, said satellite being adapted to re-transmit said radiation to another point for ultimate reception."

Even as I said it, I could think of things wrong with it. I said so. Mr. Spardleton nodded thoughtfully. "Yes, but that's not bad for a first try. We are already learning something about Mr. Clarke's process. For instance, you did not find it necessary in your claim to say that the satellite was a twenty-four-hour satellite. Why not?"

"The period doesn't seem to be important. It is only important that a satellite be in position to receive and re-transmit."

The cigar was at an angle of about forty-five degrees above the horizontal—the jaunty angle. Mr. Spardleton smiled approvingly. "Very good, Mr. Saddle. So long as one or more satellites is in position to retransmit signals to the ground or to other satellites, it seems to me that Mr. Clarke's system will work. We will have to ask him about that if we write a patent application for him. So much for the method claim. Do you think you could write an article claim for this invention?"

I had been thinking about that, knowing the question was coming. Not knowing what else to say, I naturally went back to quoting statutes. "Well, Section 101 defines the inventions that are patentable, and it says they must be a 'process, machine, manufacture, or composition of matter.' So we have to figure out where Mr. Clarke's invention fits under that Section. We already have the process, so that's out. The invention certainly is not a composition of matter, so it must be either a machine or a manufacture. I don't think this system of his can be called a machine, so it must be a manufacture if it is anything."

"I think so. According to patent law a manufacture is any man-made object or article that is not a machine. How would you define this manufacture in a patent claim? Will you include the earth as a reference point?"

"Possibly. Let's see. How about this: a relay system for

electromagnetic radiation comprising a series of satellites in orbit around the earth, said satellites being so positioned that—" I stopped and said, "Then go on from there defining the positions that are necessary to make the system work. Mr. Clarke could tell us what the minimum conditions would have to be."

"Yes. We would need a greater number of satellites if they all were in orbit close to the earth. We'd need fewer as their orbits move out farther. Mr. Clarke says that when they are out just far enough to give them a twenty-four-hour period, three of them will be enough to blanket the earth, and that seems to be the system he prefers. Well, we'll discuss it further with him when he comes in next week. Here, take your mail with you." He shoved one of the piles toward me.

I took it and went back to my office to get to work. I fully intended to do some reading on satellites before our meeting with Mr. Clarke, but I never quite got to it. The only reading I have time for is the reading that has to be done when I get ready to write a case or brief or something like that.

Before I knew it the week had passed, and the day arrived for Mr. Clarke's visit. I went through a series of interviews with Examiners earlier in the morning, so I was feeling out of sorts when I went into Mr. Spardleton's office for the meeting with Mr. Clarke. What happened there did nothing to make me feel any better.

Mr. Clarke was a sandy-haired, quiet man, with a surprisingly gentle manner. He and Mr. Spardleton had been talking about Ceylon, where Mr. Clarke lived these days, and about skin diving. I joined in and listened a while, and then Mr. Spardleton pulled a pad of paper in front of him. I knew he was ready to go to work. He said, "Now, have you ever reduced this concept of yours to writing—ever written it down and shown it to somebody else?"

"Oh, yes," said Mr. Clarke. "I published an article about it. I have a reprint here." He reached into his briefcase and pulled out a thin sheaf of papers and handed them to Mr. Spardleton. I got up and went over to the table to get a

pad of paper. As I was picking up the pad I heard Mr. Clarke continue, "I'm quite certain I was the first to conceive of the twenty-four-hour satellite, because, as you can see, I published this article back in 1945. October of 1945, to be exact."

Well, I did not turn around. There was, from Mr. Spardleton, one of those silences that can be felt, an ominous suggestive silence that fills a room. Mr. Clarke noticed it and said, "What's the matter?" I decided I would not need a pad after all, so I went back and sat down without it.

Mr. Spardleton said, "There is a provision in the patent law of this country that says no one can get a patent if the invention was described in a printed publication more than one year before the date on which the patent application was filed in the Patent Office. Such a publication would be a bar to the grant of a patent; it is called a statutory bar. Your article was published in 1945, so we are barred from applying for a patent for anything that is in it."

Mr. Clarke said, "Is that true even if I was the one who wrote the article?"

"Yes. The bar arises without regard to who wrote or published the article. Mr. Saddle, will you read the pertinent provisions to Mr. Clarke, please?"

I stepped to the bookcase. *The Rules of Practice* was handiest, so I pulled the book down. "Let's see," I said. "That provision would be 35 U.S.C. 102. Yes, here it is. Paragraph (b). 'A person shall be entitled to a patent unless —(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States.' There's a lot more, but that's the provision we want."

"I see," said Mr. Clarke. "Well, I guess that is that."

"Let's take a close look at that article you wrote," said Mr. Spardleton. "Maybe there is a gap in the description; we might be able to find something to try to patent. Let's see. Published in *Wireless World*, a British publication, Volume LI, No. 10, October 1945. Title of the article: 'Extra-terrestrial Relays.' Well, the title is certainly explicit enough. I hope the rest of the article isn't as clear."

Mr. Spardleton read, passing each page to me as he finished. As he read he said, 'On page 305 you mention television several times, and you have a graph showing the variation of orbital period and velocity with distance from the center of the earth. Page 306 has a couple of figures that show exactly what you are talking about. You even describe the broadcast frequencies that can be used with the satellites. On page 307 you discuss the power needed to operate one of the satellite transmitters, remarkably small, isn't it?' Mr. Clarke nodded.

I read the paper too, and I must say it was complete. Toward the end, on page 308, there was even some discussion on rocket design.

Mr. Spardleton said, "Mr. Saddle, do you see any way around this?"

I thought frantically, but I couldn't think of a thing. I shook my head.

Mr. Spardleton puffed cigar smoke at the ceiling in silence while we watched him. Finally he shook his head and said, "I'm afraid not, Mr. Clarke. In my opinion the bar is complete. There is no way a patent application on this subject matter can properly be filed for you at this time; you simply cannot sign the oath that says none of these statutory bars exists."

Mr. Clarke nodded. "I was afraid of something like that. Is that true of other countries, too?"

"Yes, at least all the major countries."

I decided to inform Mr. Clarke of what he should have done to obtain a patent on his concept, so I said to him, "You should have filed a patent application within one year of October 1945; that way you'd probably have the patent now."

Mr. Clarke looked at me strangely and said, "Thank you."

Mr. Spardleton puffed out a great cloud of smoke and said half to himself, "Great heavens."

Mr. Clarke and I waited. I noticed that the cigar gradually took up an angle of sixty degrees to the horizontal—the fighting angle.

Mr. Spardleton said, louder now, "No, by heavens, you couldn't have." He turned to Mr. Clarke. "Mr. Clarke, even in 1945 you could not have received a patent. You were too far ahead of your time. You could not have described at that time how to put a satellite in orbit; it couldn't be done then. And the law requires that you describe your invention in 'such full, clear, concise, and exact terms as to enable any person skilled in the art to make and use the same.'"

"35 U.S.C. 112," I murmured.

"So back in 1945 when you published your article it would have been impossible for you to meet the requirements of the patent law. Let me see that *Wireless World* article again, please. I seem to remember your saying something to that effect."

Mr. Clarke handed him the article, and Mr. Spardleton scanned it. "Yes. Here in the first column of page 305 you say, 'Many may consider the solution proposed in this discussion too far-fetched to be taken seriously.' Then on page 306 you use the phrase 'seem fantastic.' You also point out that your concept needs for its fulfillment rockets twice as fast as those in the design stage." Mr. Spardleton handed the article back to Mr. Clarke saying, "There's no doubt of it, Mr. Clarke. You could not have got a patent back in those days."

Mr. Clarke said, "As I understand it then, if a man is way ahead, he cannot obtain a patent because he cannot carry out the invention. Then, at the time he is able to carry out the invention, it is too late to obtain a patent."

"That's about the size of it. Maybe Abraham Lincoln was wrong when he said, 'The patent system adds the fuel of interest to the fire of genius.'" He stopped and shook his head and said, "There's a case on this point somewhere, but I can't—"

I was surprised. This was one of the few times I had seen Mr. Spardleton at a loss to remember a case.

Mr. Clarke said, "Well, if you could patent all these untried ideas, there would be a lot of crackpot patents coming out all the time."

"Undoubtedly," said Mr. Spardleton. "But today's crackpot is sometimes tomorrow's genius. Besides, crackpot pat-

ents would do no harm; we have them now. The good ones, if any, would reap the usual rewards. The whole situation would stimulate people to invent for the future. Nothing but good would come of it."

We all sat quietly and thought about it. I said to Mr. Clarke, "There is one consolation. Even if you had patented your communication system back in—oh, say 1947, the patent would expire in 1964. That's only four years from now, so you probably would not have made any money on the patent anyway."

Mr. Clarke looked at me in surprise and said, "That's right at that. It will probably take just about the remaining four years to set it up."

Mr. Spardleton smiled and said, "I've seen this many times. Seventeen years, the life of a patent, seems like a long time to you young fellows. But it goes by awfully fast."

"I suppose it does," said Mr. Clarke.

"You know," said Mr. Spardleton, "we would not be out of the woods even today in getting this patent for you if we could properly apply for it. Could you—even now—give us all the details necessary to put a satellite in orbit? Or is all that kind of information locked up in a government vault somewhere?"

"I see what you mean. I think we could work something out that would satisfy the Patent Office. It would take a lot of work, though. I—"

"Moffett versus Fiske," Mr. Spardleton shouted. "Please forgive me, Mr. Clarke; I just remembered that case. Moffett against Fiske. Mr. Saddle, will you pull the case, please? It's a Court of Appeals case, decided in the early thirties, about Volume 50 of the Second Series, I think."

I stepped into the library and had the case in less than one minute. It was in Volume 51. I returned and handed the book to Mr. Spardleton. He scanned the case, extracting from it all the pertinent points at an unbelievable speed. He glanced up and said, "Yes, Bradley A. Fiske, a graduate of the United States Naval Academy at Annapolis in 1874, worked his way up to become an admiral. He became concerned about the ability of the United States to

defend the Philippines, and in 1910-1911 devised many plans to recapture the Philippines if they should be captured by an enemy. Then he made his invention—a weapon—so that an enemy couldn't capture the Philippines in the first place. He filed his patent application, and the patent was issued in July of 1912. Know what the invention was?"

We shook our heads.

"The torpedo-carrying airplane. Admiral Fiske was the inventor of the torpedo-carrying airplane, but he was too far ahead of his time. He tried to enforce his patent by suing the navy later on. The District Court that tried the case added some nice fuel to the fire by giving the admiral a judgment of \$198,500, a large judgment for those days, but then the Court of Appeals put the fire out; it reversed the District Court. For one thing, the Court of Appeals held that the government was entitled to a license under the patent. Admiral Fiske was known to have inventive ingenuity, and his invention was really a war plan, so the government was entitled to use it." Mr. Spardleton looked up and said, "You know, I can't really quarrel with that part of the decision."

Mr. Clarke nodded. "It makes sense that a weapon invented by a naval officer in the line of duty could be used by the navy."

Mr. Spardleton said, "Yes, although the admiral tried to interest the naval authorities in his invention, and they would have none of it. Well, the Court went on to state the law that now keeps far-sighted men from getting patents. It said there was no airplane in existence capable of carrying the torpedo required, and no torpedo able to sustain the shock of being dropped from an airplane. The admiral said he felt sure the airplanes would rapidly grow bigger and stronger, but the Court said, '... at a time when airplanes were hardly capable of rising from the ground, Admiral Fiske presumes a plane capable of carrying and discharging a torpedo weighing a ton.' To summarize the whole affair, the Court says here on page 872 that the admiral's invention required a plane then unknown to the world, and a torpedo equally unknown. So they threw him out. And there, Mr. Clarke, you have it. You could not

have obtained a patent on your communication system when you invented it back in 1945; your rockets and satellites did not exist. The patent system lags behind technology."

Mr. Clarke nodded and sat quietly staring at the floor. He said, "Then any scheme having in it some feature not yet in existence will not be patentable, and by the time it does become patentable, it may be too late. This is true even though one knows for certain that the nonexistent feature will be developed." He looked up questioningly.

Mr. Spardleton and I nodded, and he continued, "People will be able to patent the hardware and the fuels and things like that, but they cannot patent any of the early, necessary plans and system relating to space."

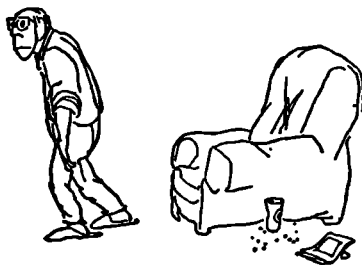
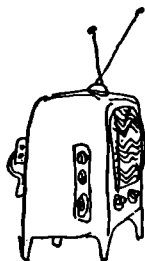
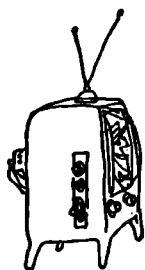
We nodded again.

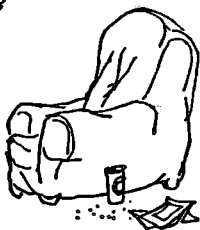
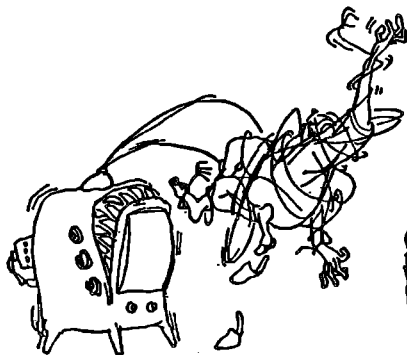
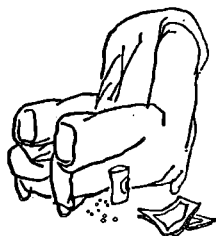
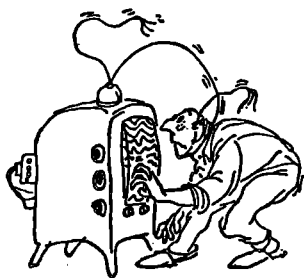
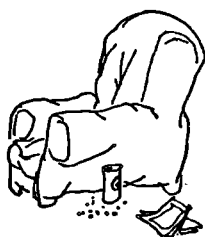
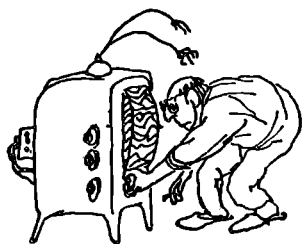
Mr. Clarke stood up and said, "It appears that the patent system is not geared to the space age. Now, if you gentlemen will excuse me, I must send a telegram. There's an article I wrote that . . . well, there's no sense in letting it be published now. I'll wait a few years.

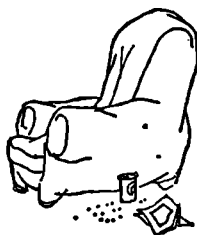
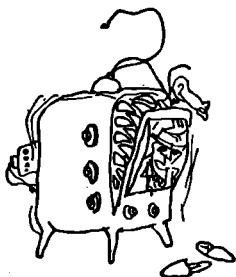
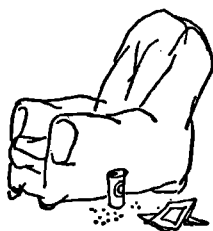
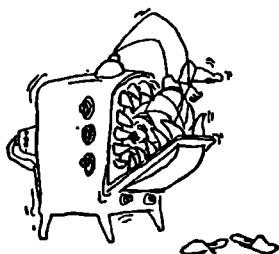
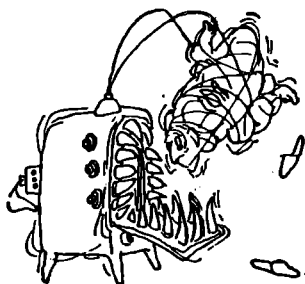
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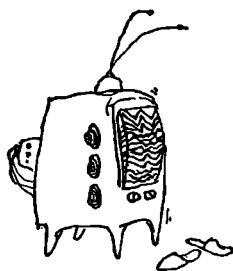
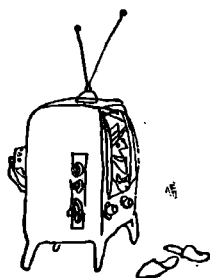
by Shel Silverstein

from *Playboy*. Reprinted in "Now Here's My Plan," (Simon & Schuster, 1960)









REPORT ON THE NATURE OF THE LUNAR SURFACE

by John Brunner

from *Astounding Science Fact & Fiction*

The confusions, complexities, and internal contradictions of man's fumbling first steps off Earth are by no means confined to legal or political aspects. (Perhaps there are some readers, in other countries, who have not yet heard the one about the little boy in first grade at the Canaveral school who was asked to count backwards. "Ten, nine, eight, seven, six, five, four, three, two, one ... Back to the drawing board, men!")

While the rocket men struggle toward mechanical perfection, a whole new field of applied biology called "Space Medicine" is working feverishly to reduce the margin of human error to a reasonable risk by the time the man-carrying ships are ready to launch. I rather wonder, though, how much thought they've given at White Sands to the sort of human failure Mr. Brunner suggests?

John Brunner is one of the growing group of young British writers who have developed primarily in association with the consistently surprising Nova magazines—*New Worlds* and *Science Fantasy*—edited by Ted Carnell. (Both magazines, I am happy to say, are now being distributed in this country.) This selection is not from either of the British publications, but from *Astounding* (now *Analog*)—representing the increasing trend toward the exchange of material on both sides of the Pond.

From: Officer commanding Moonbase One.
To: Officer commanding Project Diana.
Subject: Experimental verification of composition of Moon's surface:

As a result of our successful attempt to establish a manned post on the surface of the Moon, we are now in a position

to give a definite answer to a problem which has long occupied the minds of astronomers: viz., the composition of the surface of our satellite.

Prior to our recent landing there were three hypotheses current. The two generally accepted among experts were, first, that the surface of the Moon consisted of a substance not unlike the ash and lava poured out by terrestrial volcanoes; or, second, that much of the Moon was covered in fine dust, the result of a continual bombardment by meteoric particles, and consequently similar in its chemical composition to the dust existing in interplanetary space.

It is, however, the third hypothesis—even more widely held than the preceding two—which has been strikingly confirmed by our on-the-spot investigations.

Before going into precise details, it is necessary to refer briefly to two other points. To start with, according to current theories about the formation of the solar system, the Earth and the Moon were not—as formerly held—originally balls of hot gas. They are presumed to have condensed out of a rotating cloud of comparatively cold gases and dust particles. It is suspected that the complex organic molecules which later gave rise to life, as we know it, may already have been in existence when the planets formed.

Scientists gave it as their considered opinion that, although they were unable to detect any living creatures on our satellite, nonetheless the raw material, so to speak, from which life developed on Earth, might exist here. It will be recalled that every possible care was taken to sterilize all rockets launched toward the Moon, for fear that the presence of terrestrial bacteria might contaminate and perhaps catalyze the stockpile of pre-organic molecules, depriving us of valuable clues to the origin of life.

Second, it will be recalled that, during the reconnaissance which preceded our successful landing, one of the TV scanner missiles searching for a suitable landing place went off course and crashed not far from the site which was eventually chosen for our base. Since our arrival we have carefully inspected the wreckage. The difficulties under which we are now compelled to work have delayed the

preparation of a full report on this inspection; that will follow.

The crucial point which emerged, however, was that the TV scanner missile went off course owing to foreign matter in its guidance system. It is requested that inquiries be instituted among the technicians at the launching base with a view to establishing responsibility for this—it should not in my submission be hard to discover which of the staff is so inordinately fond of his stomach that he takes sandwiches on the job, puts them down while at work and forgets about them. Because that was the nature of the foreign matter we found: a large sandwich with one bite taken out of it. The impact, naturally, had broken the rocket wide open, and the sandwich was in fact found a short distance away where it had been thrown by the violence of the crash. It is now, I am afraid, purely a matter for speculation whether the content of the sandwich had a uniquely determinant effect; speaking for myself, I'm pretty sure it did.

The scientists responsible for predicting that terrestrial bacteria might contaminate pre-organic molecules on the Moon deserve congratulation for the accuracy of their guesswork. The man who left this sandwich in the scanner missile deserves to be hanged, drawn and quartered—but that's up to you at base. An alternative suggestion is to bury him up to his neck in a barrel full of the nice ripe Limburger he likes in his sandwiches, till he won't be able to look the stuff in the face again. Then he'll know how we feel sitting up here, having to breathe the stink with every lungful of canned air.

In fact, you'll probably notice the aroma on this memo.

I am in a position to state with authority that thanks to his damned sandwich the Moon is made of green cheese.

J. G.

by Roger Price

from "J. G., the Upright Ape" (Lyle Stuart, 1960)

Best way to eliminate the human error factor is to dispense with the human? This excerpt—the first five chapters—from a book described on the jacket as "a novel about The Way Things Are, as discovered in the adventures of an innocent Hero . . ." tries (like NASA) using an ape instead.

It is hardly necessary to state that Roger Price is a funny man. (This is "Doodles" Price, "Mad Libs" Price and TV-comic Price we are talking about.) It is well worth stating, however, that his novel is not only funny, but very good satire indeed.

1

J. G. weighed three hundred and fifty-four pounds; and, when he remembered not to walk round-shouldered, he was six feet one inch tall. He had large blue eyes, and he could see a caterpillar one hundred yards away and tell whether it was a boy caterpillar or a girl caterpillar. He could hear a leaf rustle at a distance of an eighth of a mile and tell whether it was a birch or a beech. And he had a Reflex-Reaction-Time of 9.6.

He also had a very small brain—being a primitive anthropoid, he had a cranial capacity of only five hundred cubic centimeters—and a shy and modest disposition.

His whole name was J. Gorilla Gorilla Primate, which included his generic order, his species and a "J" for decorative purposes; but his family and friends and his beautiful wife, Lotus, called him J. G., and so shall we.

Until he met the Explorer, J. G. had never seen a human being. And until the Explorer met J. G., he had never seen a Gorilla like J. G.

In both physique and temperament, J. G. was unlike the

two known types of Gorillas: the Plains Gorillas who lived in Darkestafrica at the foot of Mount Kallahili and were skittish and the Mountain Gorillas who lived right below Lake Kivu and were moody.

Many thousands of years ago, J. G.'s tribe had become annoyed by the vulgarity of their neighbors—principally the Plains Gorillas and *Pithecanthropus Erectus*—and had moved higher and higher up Mount Kallahili in search of Peace and Quiet.

They migrated upwards past Lake Kivu, past the impassable cliffs east of Lake Kivu, and eventually settled down only a few hundred yards below the point where the snows never melt.

Centuries of living in the cold, thin, mountain air of a land where food was scarce and the only shelter was to be found in caves had effected certain changes in their appearance. For one thing, they were covered with a fashionable silver-colored hair, except for their chests and faces, which were a healthy pink. And for another, their noses had evolved small, but noticeable, bridges.

Because of the scarcity of trees in that region, they had given up climbing and swinging from branches and, as a result, their arms were shorter and their legs longer and straighter than less isolated members of their species. And, because of their isolation, they were neither skittish nor moody.

Otherwise they were like other gorillas, in that their small brains were not complicated enough to deal with advanced intellectual concepts such as Purpose, Competition and Improvement. When they thought, it was only in the most simple and logical terms.

Their limited mental equipment had naturally reduced the Silver Gorillas to a savage existence. None of them ever did, or had ever done, anything without a Reason. They spent most of their time eating, sleeping and scratching. But only when they were hungry, sleepy or itchy.

Civil authority was non-existent; they practiced the atavistic institution of monogamy and their language was abysmally brutalized. They used no adverbs; their verbs did not agree in number; and there was no rule against splitting in-

finitives. Their vocabulary did not even contain words such as: "unsuitable," "traffic," "liar," "hurry," "psychosomatic," "poverty," or "work." They were, to put it bluntly, inhuman.

And, until the events which I am about to relate occurred, J. G. was no exception.

These events began one day in the middle of supper—which, in J. G.'s case, lasted from lunch until bedtime. He was shaking the snow from a lilac bush on the north slope of the plateau, when the sun was suddenly obscured by a huge, black cloud that seemed to be rushing straight toward Mount Kallahili from the east. Within a matter of minutes, the cloud had enveloped the top of the mountain in the wildest, most formidable storm J. G. had ever seen.

Gathering up an armful of lilac branches and some conch nuts, he trotted back to the cave that he shared with his beautiful wife, Lotus, to wait for the storm to pass. When he arrived, she was not there; so he sat down and began to eat the lilac branches, saving the tenderest leaves and ends for Lotus.

He finished eating and there was still no sign of Lotus. Outside, lightning flashed in the blackness, followed by great rolls of thunder; farther down the slope J. G. could hear, even over the terrible roaring of the wind, the splintering and crash of falling trees. He plunged into the storm and went from cave to cave looking for his wife.

She was in none of them; but his friend, Zum, remembered that right after lunch she had gone down the north slope of the mountain toward Lake Kivu looking for cypress resin. J. G. sighed. Lotus had always had a sweet tooth. He thanked Zum and headed down the mountain in search of his splendid wife.

The next morning the storm had passed on, and J. G. had found no trace of Lotus. He came back to the plateau and found that she had not returned. He sighed again as he realized he would have to keep on looking for Lotus; because it was the only logical thing to do. He missed her.

He methodically covered every foot of the mountain down to the lake. This was not as difficult as it might seem; because, even on a hillside covered with obstructions, J. G.

could move at a speed of twenty-five miles per hour without exerting himself.

When he had searched above the lake, he searched the mountain between the lake and the forests. Then he searched through the forests and crossed the river and searched the grass lands beyond the river and the dry plains beyond the grass lands. Finally he came to the end of the dry plains and faced the ocean. As he wandered along the beach, he came upon a sign—footprints in the sand: Lady Gorilla footprints, Lotus's footprints.

J. G. raced along the beach, following the footprints southward until they disappeared in the surf. He went several miles down the beach but the footprints did not reappear. He came back to the point where they vanished and sat down.

He wondered if Lotus could have wandered into the water and drowned; but he doubted it, as she was an excellent swimmer. He wondered what to do next. He missed Lotus very much. He also missed his supper. And his breakfast. And lunch.

For the first time in his life, J. G. was unhappy. It required great concentration on his part, because it isn't easy to be unhappy when you have such a tiny brain.

Just then the Explorer came out of a clump of cane onto the beach, accompanied by four Sailors. When they saw J. G., they all took several steps backwards rapidly. Then they stopped; and the Explorer, after a long pause, whistled softly to himself and took several steps forward.

J. G. nodded politely and looked away. He assumed the Explorer and his friends were suffering from malnutrition and eczema, and he didn't want to embarrass them by staring.

The Explorer, seemingly against the wishes of his companions, who began backing farther away, advanced cautiously toward J. G. and offered him a banana. J. G. took it and thanked him.

The Explorer then made sounds and gestures which indicated that he wanted J. G. to accompany him, and J. G. did. He went, first, because it would have been impolite

not to; and, second, because to find Lotus he had to go some place; and, third, because the Explorer kept giving him bananas.

After they had walked north on the beach for a half a mile, they came to an inlet where the Explorer's ship was anchored. J. G., who now considered the Explorer an old and trusted friend, allowed himself to be rowed out and taken on board and so, unwittingly, began his strange adventure.

2

Although his curiosity was aroused, J. G. did not have time to properly examine the ship or its fittings. The Explorer insisted on showing him, at once, to a small cabin below decks. The cabin had an iron-barred door and no window. When he had bolted the door, the Explorer stepped back, exhaled loudly and wiped his forehead with a handkerchief. Then he shouted several times down the passageway.

J. G. had already realized that the Explorer and his companions used a language that was different from his own. He had tried to communicate with them, but they neither answered nor, in fact, seemed to notice his questions; so, when a very Old Man finally came limping down the passageway, J. G. listened attentively to the loud, angry things the Explorer said to the Old Man and made a note of the exact words he used. A retentive and accurate memory is one of the few advantages of having a small and unconvoluted brain.

Later the Old Man returned alone with some bananas and plantain leaves and dropped them through the bars into J. G.'s cabin.

J. G. addressed the Old Man, using the exact words he had heard the Explorer use.

The Old Man dropped the box he was carrying and glared at J. G. "The same to you!" he shouted.

J. G. said, "The same to you!"

"Oh yeh?" said the Old Man.

"Oh yeh?" said J. G.

"Humphf!" said the Old Man.

"Humphf!" said J. G.

The Old Man glared at him again and started to leave. Then he turned and scratched his head. "God amighty," he said. "A talkin' ape."

"God amighty," J. G. said. "A talkin' ape."

The Old Man studied him, open-mouthed, for a while and then cleared his throat and said, "Hello."

J. G. cleared his throat and said. "Hello."

The Old Man then carefully pointed to J. G. and said, "You."

J. G. pointed himself and said, "You."

"No, no," the Old Man said, shaking his head. He pointed to himself and said, "Me," and to J. G. again and said, "You."

J. G. understood. He pointed to himself and said, "Me," and to the Old Man and said, "You."

The Old Man broke into a long cackling laugh. He taught J. G. a few more words and then limped back on deck. From then on, whenever he brought J. G. food, he taught him more words.

J. G. saw immediately that the construction and grammar of this new language were similar to that used by the Silver Gorillas. By the end of the week, he had enough vocabulary to carry on limited conversations with the Old Man; and when, a few days later, the Explorer came to his cabin, he was able to thank him for his kindness and assistance in helping him in his search for his beautiful wife, Lotus.

When the Explorer discovered that J. G. could speak, he was extraordinarily pleased. After conversing with him for a half an hour, he announced that he was going to take an interest in J. G.'s education. He assured J. G. that, if he applied himself, the two of them could "clean up."

During the ensuing days, he showed J. G. how to eat with a knife and fork; taught him to say "Yes sir" and "No sir"; lent him his dictionary; and allowed him to look through his telescope. He also taught him to play Pittsburgh Rummy.

The Explorer seemed to get huge enjoyment out of the games that they played together every evening.

"In spite of the fact that you're an ugly, murderous

beast, I must admit you're good company," he would say, dealing himself a card from the bottom of the pack. "I knock with two."

The Explorer won every game because he cheated. Whenever he won, he would laugh and take a drink of rum and slap J. G. on the back and give him a banana and say what a good sort he was in spite of being a bloodthirsty monster. At one point J. G. had tried to explain that he was herbivorous and never ate meat; but the Explorer was busy arranging the cards under the table so he could deal himself four queens and did not hear.

Of course, J. G. realized all along that the Explorer was dealing the cards in a peculiar fashion and was adding the score up incorrectly (an excellent grasp of arithmetic is another advantage of having a tiny brain); but he reasoned that *he* was at fault and, being stupid, had failed to understand the rules. He wanted very much to please his new friend; so he noticed carefully the way the Explorer played and began to play that way himself, dealing cards from the bottom, hiding other cards in his fur and adding the score up incorrectly. As he had a Reflex-Reaction-Time of 9.6, he was much better at it than the Explorer and immediately won three games in a row.

When J. G. won the first game, the Explorer scowled and became silent.

When he won the second game, the Explorer said J. G. was an ugly, ignorant brute and failed to add that he was also a good fellow.

When J. G. won the third game, the Explorer stood up, knocked over the table, shouted that he was a cheat and a thief, took his dictionary, gathered up all the bananas, and left, slamming and locking the door.

J. G. did not see the Explorer for the rest of the trip. He didn't see any more bananas either.

Two days later the ship docked and two Sailors came down to J. G.'s cabin. One of them carried an iron collar with a length of heavy chain attached to it.

"Cap'n says... we should put this... uh... chain on you and bring you on deck," he said. "Sir," he added

quickly, as J. G. raised his three hundred and fifty-four pounds from the floor.

J. G. was overjoyed to find he had not been abandoned. He said he would be glad to oblige. He took the collar and fitted it around his neck.

The Sailor mopped his brow with his sleeve. "Whatta ya know?" he said.

"It's like the Cap'n says," said the other Sailor. "He's too stupid to make trouble. He's big outside but he ain't got no proper brain at all."

J. G. hung his head in shame and moved sadly out into the companionway.

"Whatta ya know?" said the first Sailor. "Come on, hurry up. Move along," he shouted all at once. He gave J. G. a shove.

"Snap it up, snap it up," yelled the other Sailor, hitting J. G. across the back with the free end of the chain.

J. G. swung quickly up the ship's ladder and came out on deck entirely unprepared for his first view of the Jungle. It was there, just at the other end of a long pier.

It was big. Steel and concrete towers rose in disordered splendor toward the sky. Across the water came the sweaty, sooty, smoggy scent of the Jungle and the screech and scrape, the clatter and clank, the rumble, the rattle, the roar of the Jungle. J. G. was so startled he turned and would have gone back down into the ship; but the Sailors jerked on the chain and pulled him toward the stern, where the Explorer stood savagely chewing on a long black cigar.

J. G. wished that he and the Explorer could be friends again. He smiled broadly and nodded to show that he meant no harm. The Explorer jumped back. "None of that," he said. "Hold him, Men." J. G. looked at the deck and felt unhappy.

"I'm going to tell you something for your own good," said the Explorer. "People out there," he indicated the Jungle, "won't be as easy with you as me. You'll have to get over your bad temper, learn some manners and Keep Your Place."

J. G. nodded dumbly.

"Treat your Betters with respect. Do what you're told. Don't talk back. Be satisfied with what you get, and maybe you'll get along. That's How Things Are."

J. G. thought about this and then asked exactly how *were* things?

"Don't talk back!" yelled the Explorer, hurling his cigar to the deck and stamping on it. "Chain him to the stanchion. I'm going ashore."

The Sailors chained J. G. to the stanchion and left him. He lay on the deck thinking. He wondered if his beautiful wife, Lotus, were somewhere in the Jungle. And if she were would he ever be able to find her? Would he ever be able to get back home himself? He wished he knew How Things Were. After a while he bit through the chain and stood by the rail looking out across the water.

3

When the Explorer returned to the ship, he was accompanied by Quimble, the Professor. Quimble was a small man with a wrinkled suit and face who wore spectacles attached to his coat by a black ribbon and socks that did not match. He walked around J. G., patted him on the back, smiled at him, felt his head and murmured "Excellent" four times. He then reached a financial agreement with the Explorer and invited J. G. to be his house guest. He extended a banana along with the invitation and J. G. accepted both readily.

J. G. was actually glad to leave the ship and go with Quimble, who seemed much friendlier than the Explorer; but when they reached the end of the pier and he saw the hundreds of Jungle Creatures hurrying in all directions at once, each seemingly impelled by some private crisis, he had a moment's doubt. However, he followed Quimble into the crowd and was relieved to find that, as long as he remembered not to walk round-shouldered, no one paid the slightest attention to him.

Quimble lived in a clearing in the Jungle called the Campus. The Jungle Creatures sent their Young to the

Campus to be taught How to Get Along in the World. The ones who were not able to learn How to Get Along in the World remained on the Campus, became Professors and taught other younger creatures How to Get Along in the World. It was a remarkable system and very effective, in that it invariably produced a surplus of Professors.

Quimble showed J. G. to a room in the basement of his home, which he called his laboratory, and brought him a crate of vegetables for supper. J. G. was grateful and determined to find out How Things Were so he wouldn't displease Quimble and lose his friendship, as he had the Explorer's.

Like the Explorer, Quimble also had games he wanted to play with J. G.; only his games involved round holes, square pegs, mazes, and ink blots, and were called Tests.

"I shall use your reactions to establish final proof for my theory, the Quimble Theory," he said. "By observing and confining myself only to factual evidence, I shall be able to arrive at an irreversible and inflexible conclusion. That is the Scientific Method."

J. G. was quite impressed. He asked Quimble what his Theory was.

Quimble's thin face broke into a wide smile. It was the first time anyone had ever asked him this. He hurried over to J. G. and patted his head. "I am explaining it in a three-hundred-thousand-word paper," he said confidentially, "which will be titled, *The Opposed Thumb—the Principal Reason that Man is Superior to the Apes.*"

J. G. looked at his thumb and asked what it was opposed to.

"Nothing," said Quimble, rubbing his hands together. "You see it is much too high up on the forearm. It is not opposite the fingers and is, therefore, incapable of grasping; as is my thumb, for instance."

J. G. looked at Quimble's thumb.

"Ah," said Quimble. "It's too bad you are merely an unevolved brute. I could explain it clearly if you could talk."

J. G. thought about this for a while and then cautiously asked why he was not able to talk.

"Because you are a Gorilla, and it has been observed that

Gorillas cannot speak, and what has once been proven is fact. That is the Scientific Method," Quimble said.

J. G. asked if this was How Things Were and Quimble said, "Of course, of course, of course." But he had lost interest in the conversation and was busy measuring J. G.'s feet. Before evolving his Theory, Quimble had devoted thirty years to a study of the psychology of Mice. He had constructed a complicated maze and would release mice at one end and see how long it took them to reach the cheese which he placed at the other end. As they became more adept at negotiating the maze, he introduced discouraging features such as metal plates, which gave them shocks, and barriers to climb. Later he tested their determination by striking at them with a sawed-off broom handle as they attempted to reach the food. He didn't learn much, but he got rid of a surprising number of mice; for which he received an Award from the Rockefeller Institute.

The next day Quimble began giving J. G. a series of tests, which, remembering his experience with the Explorer, J. G. made sure that Quimble won. After every test Quimble appeared highly gratified. He would chuckle, take a drink of celery tonic and give J. G. a banana. Then he would gather up his notes and go upstairs, leaving J. G. alone.

During these periods when he was left alone, J. G. made a tremendous advance in his education. He learned to read. Once he had mastered the basic technique, he found that he was able to assimilate a great deal of information—an entire book, in fact—in a surprisingly short time. This was, no doubt, due to the fact that his small brain was so empty it offered no resistance to outside ideas. Of the number of books Quimble had lying about the laboratory, J. G. found that he enjoyed the ones on mathematics best; and, by the time Quimble announced that the Tests were completed, he had re-read *Principia Mathematica* four times with increasing pleasure.

Quimble had transcribed the results of his tests in a large ledger. Under the heading, "Positive and Final Proof for the Quimble Theory," he had written:

At last I can say without fear of contradiction that

the Quimble Theory is correct in all respects. With Subject's non-opposed thumb, it is impossible for him to manipulate or even pick up a simple device such as a cigarette lighter, or an automatic rifle. This precludes any possibility of his species ever developing civilization or culture on the high level made possible by Man's opposed thumb.

The non-opposed thumb even makes it impossible for Subject to adjust to civilization as it is now established. When given at random a camera, a drill press and a typewriter, he was forced to operate all three devices with his feet. Under ordinary non-test conditions he would be wearing shoes and would therefore be completely helpless.

Q. E. D.

And under the heading, "Uncorrelated Evidence," he had written:

Subject likes bananas. Significant???

Quimble was so proud of the result of the Tests that he invited a group of his colleagues to study J. G. The Colleagues, who were called Runcible, Rangle, Bypod and Partridge, inspected J. G.

And vice versa.

As none of the colleagues had any interest in Quimble's Theory, they paid no attention to his conclusions and so agreed with him completely. With the exception of Partridge. It happened that Partridge was writing a Paper of his own entitled, *The Malformed Larynx—the Principal Reason that Man is Superior to the Apes.*

He engaged Quimble in argument.

"You can see for yourself," he said to Quimble, "due to his malformed larynx he is unable to speak. That is what makes him inferior. His thumb is irrelevant . . ."

"The superior thumb of man has enabled him to develop the culture that led to the necessity for inventing language," said Quimble.

"Thumb-schmumb," said Partridge. "There's nothing

wrong with his thumb. He certainly exhibits more manual dexterity than *you*."

"I have proven in my Paper that—"

"Can *you* peel bananas with your feet?"

"Thumbs are not on the feet."

"His are," said Partridge triumphantly. "He is four times as capable as you."

"Bah!" said Quimble and left to spread rumors that Partridge was having incorrect relations with his forty-six-year-old secretary. Partridge also left to spread a report that Quimble had been seen at a Meeting attended by a Communist in 1949. This was the accepted method of debate used by Professors.

Runcible, Rangle and Bypod finished the rest of the cheap canapes Quimble had provided, inspected J. G. once again, agreed with each other that Quimble and Partridge were intellectual dilettantes and went home to work on *their* Theories.

The episode left J. G. feeling depressed, which is even harder for a Gorilla to feel than Unhappy. He knew his new friend, Quimble, was angry, but he didn't know why. He felt it had something to do with How Things Were and wished he were not so subhuman and Retrogressive. He wished he knew what *Retrogressive* meant. He made a note to spend more time improving his vocabulary. He noticed that he was starting to shed.

Quimble and Partridge continued their debate at the Faculty Club and Quimble got more and more infuriated. An attack upon his Theory was tantamount to an attack upon his person; and, although his arguments got louder and louder, Partridge always came back to the same ridiculous point, "Can *you* peel bananas with your feet?"

"Irrelevant," Quimble would shout.

"Communication is the unique factor," Partridge would state with maddening calm. "If manual manipulation of external phenomena were the major factor, you and I would be skulking misfits in a world run by Lemurs, Chimpanzees and Opossums."

Quimble would turn red in the face and say, "Bah!" or sometimes, "Pfagh!" and stalk out.

"Quimble is a good chap," Partridge would say to the other Professors, "except for that idiotic monomania he has about thumbs. But, of course, what can we expect from a man with his political background?"

Quimble began to brood. He bought several stalks of bananas and spent hours trying to remove their skins with his toes in order to counteract Partridge's arguments.

He was unsuccessful.

His fondness for J. G. began to diminish in direct proportion to his inability to answer Partridge's argument. Every time Quimble saw J. G. reach for a banana, it seemed like a personal affront. J. G. became a living refutation of his Theory and an ally of that crackpot, Partridge. "I suspected you from the start," he said to J. G. one day.

J. G. shuffled about and began to operate the drill press and the typewriter rapidly, hoping in some way to please his friend.

"I see it all now," hissed Quimble. "You were planted here to spy on me. You've been working foot in glove with that Ignoramus."

J. G. dealt a stacked hand of Pittsburgh Rummy, put four round pegs in square holes, field stripped the automatic rifle, and gave a moronic interpretation of a Rorschach Ink Blot.

Quimble did not notice. "Of course," he said, "goodness me, I should have seen it. What a fool I've been. Partridge, that idiot, is too much of an idiot to have planned this idiotic campaign against me. It was *you*," he leveled a shaking forefinger at J. G., "*you*—who engineered the entire thing. You have been against me from the start!" Quimble snatched up an empty fruit crate and splintered it over J. G.'s shoulders. He grabbed another crate and J. G. warily raised his arm over his head to protect himself. Quimble turned pale. "Help, help, Murder!" he shrilled. His eyeglasses fell to the floor and he scampered head first into the wall. Still shouting for assistance, he felt his way along the wall to the door and left.

J. G. knocked some splinters out of his ear and sighed. He found the Kleenex box and blew his nose loudly. He

felt that he was in for another banana shortage. He was right.

When it came time for supper and there was none, J. G. decided he would have to go and look for some. He picked up Quimble's eyeglasses and put the ribbon around his neck. Perhaps, he thought, if he could find Quimble and return the eyeglasses, they could become friends again. He wondered what he had done wrong this time. He went to the door and, not noticing that it was locked, opened it, went upstairs, through another door and out onto the Campus.

4

There was no sign of supper on the campus. The few trees were bare of leaves and their bark was withered and tasteless. J. G. ate several feet of a boxwood hedge but found it unappetizing. In spite of his coat of fashionable silver fur, he began to feel the chill of the early spring night; so, walking rapidly, he left the Campus, passing several groups of students, who took no notice of him, and headed toward a more brightly lit section of the jungle.

He had gone perhaps six blocks when he detected the faint, but unmistakable, smell of supper. He followed the smell and came to the store of Ambush, the Grocer. Through the brightly lit window he could see an abundance of fruit and vegetables in wooden boxes. He went inside and politely ate several bananas and a dozen plums.

Ambush's daughter came from behind the counter and stared at J. G.'s massive physique. As she was the first Jungle female he had seen at such close quarters, he nodded, smiled and inspected her carefully.

Miss Ambush, because of certain private and disturbing fantasies that regularly imposed themselves upon her consciousness, thought of herself as a Nymphomaniac, not knowing that Nymphomaniacs are only imaginary, folk-lore creatures that Small Boys are taught to believe in, like Santa Claus or the Easter Bunny. However, as no male had ever shown an interest in her, Miss Ambush had never had the opportunity to correct her humiliating opinion of herself. She shuffled closer to J. G. and looked up at him and said, "Gee."

J. G. conquering an instinctive aversion to her thin, hairless arms, her sharp nose and her insignificant mouth, nodded sociably and ate two cantaloupes and a cauliflower.

She watched him with undisguised admiration. "You a Stoodent?" she said.

J. G. said well, yes, he was studying, trying to find out How Things Were.

"Huh?" she said.

J. G. repeated that he was interested in finding out How Things Were.

"Likewise, I'm sure," she said, looking quickly over her shoulder toward a small door at the rear of the store. "I got a date tonight with a rich, handsome feller," she said, "who has a Big Car. He wants to take me to Loew's Uptown to see 'Shoot 'em in the Stomach and They Take Longer to Die.'" J. G. ate some bananas and nodded again.

"It's a Western," she added. J. G. thought how wonderfully friendly People were and he smiled at Miss Ambush and offered her a banana.

She ignored it and went on, "But I don't think I'll go with him—this rich handsome feller, I mean, with the Big Car—because he's so crazy for me and he wants to squeeze me and hug me and kiss me . . . and . . . and . . . get fresh." She frowned at J. G. and added crossly, "I don't allow that. I got self-respect and I don't have no unnatural thoughts, you hear?"

J. G. finished a cantaloupe, and said he was sure she didn't.

"And I ain't the type girl like Pappa says who's always thinking about men, men all the time and reads trash magazines. I got a clean mind." She ran her hand over J. G.'s arm and plucked at the fashionable fur. "Hey, you Stoodents sure dress funny," she giggled. "Have you seen 'Shoot 'em in the Stomach and They Take Longer to Die'?"

J. G. said he didn't think he had.

"Ya like to?" she asked quickly.

J. G. said it was awfully nice of her to ask and finished the bananas and ate six inches off the bottom of the stalk.

"Pappa, Pappa," shouted Miss Ambush untying her apron. "Pappa, Pappa, Pappa."

A thick man came out of the back room carrying a sandwich and a newspaper. He wiped Russian Dressing off his chin and looked at J. G. with mistrust.

"Hey, what'sa hoppen?" he said.

"Pappa, this feller asked me to the movies," Miss Ambush said, scurrying behind the counter, collecting her hat, coat, and shoes.

"Ahhh! O Ho!" said Ambush. His face twitched and froze into an expression which J. G. rightly assumed to be a smile. "Hey!" he said, "so you take out Pipola?" He bounded forward and banged J. G. in the ribs with his elbow. "Ho Ho! Hey," he said, "you got a Big Car?"

J. G. said no, he didn't.

Ambush shrugged. "Hokay, hokay," he said. "Who cares?" He slapped J. G. on the back with the hand that had the sandwich in it and splashed Russian Dressing in his ear. "You smott feller. Pipola is good girl, you bet. Feller who get Pipola is locky feller. She good cook. Stay home. Not like girls who all time think about nothing but feller and making monkey's business. She got no bad thoughts, you bet." He turned and scowled ferociously at his daughter, who rushed from behind the counter and took J. G.'s arm.

"Pappa," she said, "cut that out."

"Hokay," said Ambush. "You hovva good time, you bet, and—" He suddenly stopped. He had moved from behind the counter and he was staring at the bare banana stalk.

"Hey!" he said. "What's hoppen to fruits?"

"Now, Pappa," Miss Ambush said.

Ambush slapped both hands to his head. "And canna-loops. Gone! and plumses!" J. G. had a feeling that he had done something wrong again.

"Now, Pappa, cut that out," Miss Ambush said desperately. "We're going to the movies."

Ambush took a deep breath and held it while he ground the rest of the sandwich into the counter. "Hokay," he said exhaling. "Six dollar bananas. Wholesales. Four dollar plumses . . . Hokay. Who cares?" he finished jovially.

"Let's go," said Miss Ambush. "C'mon."

J. G. finished the last cantaloupe and turned toward the door but Ambush grabbed his arm.

"Hey! Sport!" he said sternly. "Jost a minutes. What's you name?"

J. G. told him.

"Primates. Hey, thot's Greek name, ha?"

J. G. said he didn't think so.

"Hokay," said Ambush after a moment. "Who cares? Hey, what you take up on Compuss? Medical? Engineer? Foots-balls?"

J. G. said he didn't really know, as he had just been a guest of Quimble, the Professor, for a short time, and actually he was only interested in trying to find his beautiful wife, Lotus, who had been lost in—

Ambush interrupted with a horrified shout. "*HOO?*" he said. "You got *alreddy* wife?"

J. G. said oh yes, of course, and Ambush made a strangled sound and pounded his fist against his head.

"Let's go. C'mon. Let's go," said Miss Ambush, leaning against the small of J. G.'s back and shoving. "Let's go."

"No gone *nowhere!*" yelled Ambush. He peeled her away from J. G. and dragged her backwards. "You crazy?" he yelled swinging a backhand blow at her head which she ducked automatically.

"Pappa," she wailed, "you cut that out. He's a nice feller."

J. G. decided he had better be going before these People got angry with him, but Ambush leapt to the door and blocked it.

"Hokay, Sport," he said ominously. "You eat oop all fruits. You owing ten bucks."

J. G. understood that he was supposed to give something in return for the bananas and fruit he had eaten; he produced his deck of cards and offered to deal a stacked hand of Pittsburgh Rummy.

Ambush pounded his head again. "Where's my fifteens bucks? You got expansive fur coat so pay opp." He held out a quivering palm. "Hand over."

J. G. regretfully indicated he had nothing to hand over. Ambush opened the door enough to get his head outside and began to yell. "Poliss! Holp! Poliss!"

"Pappa, Pappa," bawled Miss Ambush, rushing to J. G.'s side. "You let him alone, Pappa."

"Poliss. POLISS. POLISS!"

Now J. G. was sure that he had done something wrong. He wondered what it was this time. Perhaps he was so stupid that he would never learn How Things Are. He scratched his head and noticed that he was shedding again.

Kelly, the Cop, came to the door then; and, when Ambush explained the situation, Kelly sternly told J. G. that he must pay Ambush the twenty dollars he owed him. J. G. could tell that everyone was displeased with him. He felt so lonely and ashamed he could do nothing but stand and stare at the floor.

"Let him alone, Pappa," said Miss Ambush. "I'll pay for the fruit."

"Shoddop," shouted Ambush. "Go in back room! You hear? You crazy." He addressed Kelly, who was busy dropping apples into a paper sack he carried about for that purpose. "Ron him in," he said.

"I don't know if it's strictly legal and all," said Kelly. "It strikes me this creature isn't no human being. It strikes me he's more like a ape."

Miss Ambush waved her finger defiantly at Kelly. "It takes one to know one," she screamed.

"Ape?" jeered Ambush. "Does ape have eyeglasses? Ha?"

"Well, no," said Kelly. "I admit you have a telling point there."

"Ron him in," said Ambush and turned to his daughter, who was bawling at the top of her voice. "*Shoddop*," he said paternally.

And so Kelly took J. G. by the arm and escorted him toward the Station House.

On top of everything else, J. G. was still hungry.

5

At the station house, Kelly took J. G. before the Sergeant who was seated behind a high desk. The sergeant leaned over and peered closely at J. G. "Name?" he said.

J. G. told him and he laboriously inscribed it in a ledger. "Occupation?" he said and J. G. told him he was a Gorilla. "Oh," said the Sergeant with a note of respect in his

voice. He looked at J. G. more intently and motioned to Kelly. "You recognize him?" he said.

"Not me," Kelly said. "Maybe he's a Outta Towner."

"How about that?" the Sergeant said. "Where you from?"

J. G. said that he had only recently arrived and that originally he was from Mount Kallabili.

The Sergeant looked at Kelly and nodded. "Better call Mr. Onnatazio," he said in a low voice. He wrote something else in the ledger, then scowled and said to no one in particular: "Heldovergeneralsessionscourt — tuesdayallowedamakeonephonecall."

A guard tapped J. G. politely on the shoulder and escorted him through another room, where a small, surly man shouted, "Hey," held up a camera and flashed a bright light at them. Then they went into an elevator. From the elevator they went down a long corridor, up a flight of iron steps and into a small antiseptic-smelling cell. "I'll let you know as soon as Mr. Onnatazio sends someone," the Guard said. "It usually don't take more'n a hour."

The Guard was wrong. No one sent anyone for J. G. After a while he decided not to wait and curled up on the concrete floor and went to sleep instantly.

The next morning the newspapers carried headlines which said: DARING ROBBERY FOILED BY GROCER and APE MAN CAPTURED BY HEROIC POLICEMAN and RECENT CRIME WAVE LAID TO APE MAN. There were pictures of J. G. and the Sergeant on the front page.

J. G. was awakened at ten o'clock by another Guard, who brought him a bowl of oatmeal and four slices of cold toast. "You got a visitor," he told J. G. J. G. jumped up, thanked the Guard and attempted to smooth down his hair. Perhaps it was his old friend the Explorer, or his friend Quimble, the Professor, or maybe his unknown friend, Mr. Onnatazio.

"It's Flack, the Publicity Agent," said the Guard.

Flack was a young man in a depressing suit who was accompanied by three attractive girls. From a distance, they inquired about J. G.'s health and then left. The afternoon editions of the newspapers had larger headlines which said: TV ACTRESS IDENTIFIES APE MAN AS ATTACKER and TORE CLOTHES OFF SAYS MODEL. There were pictures of the TV

Actress in bed, with a dotted line leading from the window to her bodice. There were larger pictures of the Model demonstrating how her clothing had been disarranged.

The late-afternoon editions had even larger headlines: ASSAULTED TWELVE TIMES IN HOUR SAYS MODEL. There were pictures of the Model, whose name was Wanda Axelrod, the Model's roommate, the Model's parents, a scratch on the Model's knee and the Model's High School Chemistry Teacher. There were no pictures of the Sergeant, or J. G., or the TV Actress.

That evening, right after supper, J. G. had another visitor. It was Pipola Ambush, the Grocer's daughter. She came in carrying a bag of bananas, a bundle wrapped in brown paper and a large box. "I couldn't get away before," she said. "Pappa is watching me like a bloodhound. Did you really do—like they said to those girls in the paper?"

J. G. said he didn't understand what she meant but, in any case, he hadn't done anything to any girls. He was sure.

"Um," said Miss Ambush. "When I read about it, I got so *mad* at Pappa I coulda killed him. Look, I brought you something." She gave him the bananas and then opened the box. Inside was a chocolate cake.

J. G. said he certainly appreciated her thoughtfulness and ate the bananas.

"I baked it myself," Miss Ambush said as J. G. started on the cake. "I like to cook and sew and stuff. I'm not like those dirty minded girls who make up all those things about you in the papers. Ya sure you didn't do—you know, like they said—to them?"

Oh, no, honestly, he didn't, J. G. said.

"Um," she said. "It must be awful to have dirty minds like they have."

She clucked her tongue and began unwrapping the bundle she had carried in. "I figured you'd be chilly here," she said. "I brought you one of Pappa's coats. It's from his lodge outfit and he'll never miss it, 'cause they blackballed him outta the lodge for losin' his temper." She unfolded a long, black coat with gold buttons and gold piping on the lapels. She trotted around behind J. G. and held it up. "Try

it on," she said. "It oughta fit, I let out the back as far as I could."

J. G. said it was the most beautiful thing he had ever seen and that it fit him fine. He even managed to get one button buttoned.

"Gee," said Miss Ambush, "you look swell." She stood back and admired him. "Are you *sure* you never did any of those things like those dirty minded girls made up you did?"

J. G. said he was sure. Miss Ambush swallowed and then said brightly, "Well, I gotta hurry back now. Besides Pappa watching me, I gotta date with this boy friend who's a handsome Surgeon and a Doctor and he's gotta big Cadillac and is crazy for me and wants to make advances and put his arms around me . . . and . . ." Suddenly Miss Ambush stopped and stared pathetically at J. G. The place where her chin should have been quivered, and two large tears formed in her eyes, and trickled down her thin cheeks.

J. G. became alarmed. He asked if something was wrong and if he could do anything to help.

Miss Ambush's tiny mouth opened several times and finally she said, "I gotta go home," and, clutching her purse tightly against herself with both hands, she left and walked rapidly down the corridor.

J. G. shook his head. He wondered if Miss Ambush was sick. He wondered if he had done anything to make her unhappy. He hoped not because she had truly been very kind to him, bringing him food and the beautiful coat. He rubbed his hand over the piping on the sleeve and thought how proud his wife, Lotus, would be to see him so dressed up.

The next morning J. G. had his third and last visitor. "It's McKooly," the Guard said. J. G. asked who McKooly was and the Guard looked at him curiously. "He does things for Mr. Onnatazio," he said. He left the door unlocked and in a few minutes McKooly walked in and stood frowning at J. G.

McKooly was perhaps fifty years old, had straight dark hair, graying at the sides, heavy eyebrows, large, black eyes behind steel rimmed glasses, and his head barely came to J. G.'s shoulder. He lit a cigarette and leaned against the wall. "All right," he said, "what's the big idea?"

J. G. shuffled his feet and said he didn't have any idea—not even a little idea.

"You can get in big trouble using Mr. Onnatazio's name around here," he said. "Or anywhere else for that matter."

J. G. said there must be some misunderstanding.

"You bet there is," McKooly said, "I checked on you yesterday. No one in the Syndicate ever heard of you. You got no record." McKooly suddenly thrust his forefinger at J. G. and said in a hard, flat voice, "What's your angle, pal?"

J. G. ducked away and crouched warily in the corner.

McKooly started at him, then shrugged. "It strikes me," he said, "that you're a wee bit stupid."

J. G. traced an invisible circle on the floor with his non-opposed thumb and admitted this was true. He said he was sorry he had such a small, stupid, useless brain; but, being a Gorilla, there was nothing he could do about it.

McKooly took a step forward and regarded J. G. with fresh interest. "A Gorilla?" he said softly. "A real Gorilla? You know you could be at that, though I'd of sworn you were Hibernian. Could it be, do you suppose, that you're an Irish type of Ape?"

J. G. said no he was just a Gorilla type of Primate.

McKooly's attitude changed completely and he clucked sympathetically. "Imagine," he said, "putting a dumb beast in a miserable jail. It's a violation of your Civil Rights. You should be in a nice Zoo." He threw his cigarette on the floor and stamped on it. "It's a disgrace," he said indignantly. "I'm going to see what I can do for you."

For some reason, possibly because he had little liking for his own kind, possibly because he had no family, possibly because he was small, McKooly felt a deep and sincere affection for animals. He fed stray cats, adopted lost dogs, kept three white mice in his hotel room and put bread crumbs on his window sill for pigeons.

"I tell you what," he said suddenly and J. G. sat up. He had been desperately hoping someone would tell him what.

"I'll have Tort get you out of here as soon as I can get in touch with him," McKooly said. He looked at his watch. "As soon as you get out you come and see me. Here's the address." He wrote "Hotel Van Dixon" and a street num-

ber on an envelope and gave it to J. G. "I'll talk to Mr. On-natazio," he said, "and maybe you can go to work for him. He can always use someone your size."

He opened his wallet and handed J. G. a five dollar bill. "This'll keep you from starving to death in the meantime." McKooly then shook hands, said once again that it was a disgrace the way J. G. was being treated and left.

J. G. looked at the five dollar bill suspiciously and then ate it. It had a pleasant green taste, but he didn't think it would keep him from starving. Not for long anyway.

That afternoon J. G. was taken from his cell to a large, high ceilinged room with worn oak paneling. A sign on the high double doors said, "General Sessions Court. Judge Ponder presiding." A dozen people were huddled on benches which faced a high desk, behind which sat a kindly looking man wearing a black robe.

Ponder, the Judge, was a kind man who took his responsibilities seriously and was even trusted to a limited degree in some sections of the Jungle. When J. G. was brought before him, he inspected him thoughtfully, called for the arresting officer's report, read it and then asked J. G. to hold up his hand so he could see his thumb.

"Bailiff," Ponder said, "in my opinion the officer's original suspicions were correct. The defendant does indeed seem to be an anthropoid of the family *Simiidae*. To wit, a gorilla. An unusual specimen, to be sure, but certainly a gorilla."

The bailiff stared, horrified, at J. G. "Stand back, your honor!" he shouted. "I'll get the riot squad. We'll capture him!"

"Don't be silly," Ponder said. "He is in no need of capturing. He seems quite rational and, as he has been subjected to due process of law so far, he is, according to precedent, entitled to the full extent of that due process. Proceed with the case."

"Against an ape, your honor?" the bailiff said.

"I have devoted my life to serving the principles of liberalism upon which our system of jurisprudence is founded," Ponder said. "Am I to deny this creature, or any creature, the right to fair and equitable justice because he differs

from us in race, creed or species? Would you have it said that I practiced discrimination?"

"Heaven forbid!" the bailiff said.

"In the eyes of the court, all defendants are equal," Ponder said, "and this one may be more equal than most. Having a tiny gorilla brain, he no doubt needs help and advice rather than correction. How fortunate for him that I am a liberal judge. Proceed."

The bailiff read the charge against J. G.

When he had finished, Ponder leaned forward and addressed J. G. in a sympathetic manner. "Primate, my boy," he said, "you were arrested and placed in jail because you appropriated property belonging to someone else, to wit: bananas. There are laws against this."

J. G. said he was sorry, but he had been very hungry.

"Motivation is considered by the court only if in so far as it assists in establishing guilt."

J. G. rubbed his nose and respectfully asked if there were also laws against starving to death.

"Certainly not," Ponder said, "unless the Party contemplating the action intends to perpetrate it in a public place, thereby blocking traffic. This constitutes a Nuisance. Ordinance 763, paragraph 4."

J. G. said he would remember.

"You must understand," Ponder continued, "that laws are made primarily for the protection of property rights. In your original aboriginal society, food grows plentifully for the picking and population is low. The reverse is true here. You have a built-on fur coat. We must wear clothing. We need many thing besides food and are forced to employ a complex system whereby a common medium of exchange is traded for goods and services. Some make overcoats, some build homes, others study medicine, tap telephones or repair stoves. All trade their specialized skills for food grown by the farmer, processed by the processor and distributed by the distributor. You must learn to fit yourself into this system. Utilize some specialized skill of your own and trade it for food."

J. G. said he understood. He could trade his specialized skill as a banana stealer for food and shelter in the jail.

"Um, that's not exactly what I mean," Ponder said. "You must learn to do something constructive, so that you can Get Ahead and Amount to Something."

J. G. said he meant no disrespect but Why?

"Because," said Ponder, "that's the Way Things Are."

J. G. had been afraid this was Why.

"The subject is too large for your small brain," Ponder told him. "Remember I am older and therefore wiser than you. Take my word for it. First you must learn to Make Something of Yourself. Then it will be easy for you to Amount to Something. Cultivate good manners. Be punctual. Keep your hair combed. Don't criticize. Honesty is the best policy. Avoid evil companions. Step out into the hall. You're shedding on the floor."

J. G. stepped into the hall and Ponder called to him through the open door. "As this is your first offense, you are placed on thirty days' probation. You are free to go. Get yourself an honest job. Crime does not pay."

CHIEF

by Henry Slesar

from *Playboy*

Henry Slesar, like several other new young writers, works at both mystery-suspense-psychological-thrillers and science-fantasy. In this vignette, he makes the jump from *How Things Are* to *How They All Too Well May Be*...

Mboyna, chieftain of the Aolori tribe, showed no fear as the longboat approached the island. But it was more than the obligation of his rank which kept his face impassive; he alone of his tribesmen had seen white men before, when he was a child of the village half a century ago.

As the boat landed, one of the whites, a scholarly man with a short silver beard, came toward him, his hand raised in a gesture of friendship. His speech was halting, but he spoke in the tongue of Mboyna's fathers. "We come in peace," he said. "We have come a great distance to find you. I am Morgan, and these are my companions, Hendricks and Carew; we are men of science."

"Then speak!" Mboyna said in a hostile growl, wishing to show no weakness before his tribe.

"There has been a great war," Morgan said, looking uneasily at the warriors who crowded about their chief. "The white men beyond the waters have hurled great lightning at each other. They have poisoned the air, the sea and the flesh of men with their weapons. But it was our belief that there were outposts in the world which war had not touched with its deadly fingers. Your island is one of these, great chief, and we come to abide with you. But first, there is one thing we must do, and we beg your patience."

From the store of supplies in their longboat, the white men removed strange metal boxes with tiny windows. They advanced hesitatingly toward the chief and his tribesmen,

pointing the curious devices in their direction. Some of them cowered, others raised their spears in warning. "Do not fear," Morgan said. "It is only a plaything of our science. See how they make no sound as their eyes scan you? But watch." The white men pointed the boxes at themselves, and the devices began clicking frantically.

"Great magic," the tribesmen whispered, their faces awed. "Great magic," Mboyna repeated reverently, bowing before the white gods and the proof of their godhood, the clicking boxes. With deference, they guided the white men to their village, and after the appropriate ceremony, they were beheaded, cleaned and served at the evening meal.

For three days and nights, they celebrated their cleverness with dancing and bright fires; for now, they too were gods. The little boxes had begun to click magically for them, also.

PSALM

by Lester del Rey

from *Fantastic Universe*

The AEC is my shepherd; I shall not live.

It maketh me to lie down in radiant pastures; it leadeth me beside deathly waters.

It destroyeth my bones; it leadeth me in the path of frightfulness, for its name's sake.

Yet, though I walk through the valley of the shadow of death, I will hear no evil; for thou art with me; thy bomb and thy SAC, they comfort me.

Thou preparest a fable before me in the presence of mine enemies; thou anointest thy words with oil; my cup runneth over.

Surely, strontium and fallout shall follow me all the days of my life; and I will dwell in the house of the AEC—but hardly forever.

THE LARGE ANT

by Howard Fast

from *Fantastic Universe*

There is no need, at this late date, to introduce to anyone the author of "Citizen Tom Paine" and "Spartacus." But for those of you who have not been aware that America's foremost chronicler of historical rebellion has turned his hand to the literature of contemporary social and scientific revolution as well, I should note here that this and other Fast science-fantasies (mostly from *F&SF*) are now available in a Bantam Books collection, "Edge of Tomorrow."

There have been all kinds of notions and guesses as to how it would end. One held that sooner or later there would be too many people; another that we would do each other in, and the atom bomb made that a very good likelihood. All sorts of notions, except the simple fact that we were what we were. We could find a way to feed any number of people and perhaps even a way to avoid wiping each other out with the bomb; those things we are very good at, but we have never been any good at changing ourselves or the way we behave.

I know. I am not a bad man or a cruel man; quite to the contrary, I am an ordinary, humane person, and I love my wife and my children and I get along with my neighbors. I am like a great many other men, and I do the things they would do and just as thoughtlessly. There it is in a nutshell.

I am also a writer, and I told Lieberman, the curator, and Fitzgerald, the government man, that I would like to write down the story. They shrugged their shoulders. "Go ahead," they said, "because it won't make one bit of difference."

"You don't think it would alarm people?"

"How can it alarm anyone when nobody will believe it?"

"If I could have a photograph or two."

"Oh, no," they said then. "No photographs."

"What kind of sense does that make?" I asked them. "You are willing to let me write the story—why not the photographs so that people could believe me?"

"They still won't believe you. They will just say you faked the photographs, but no one will believe you. It will make for more confusion, and if we have a chance of getting out of this, confusion won't help."

"What will help?"

They weren't ready to say what, because they didn't know. So here is what happened to me, in a very straightforward and ordinary manner.

Every summer, sometime in August, four good friends of mine and I go for a week's fishing on the St. Regis chain of lakes in the Adirondacks. We rent the same shack each summer; we drift around in canoes, and sometimes we catch a few bass. The fishing isn't very good, but we play cards well together, and we cook out and generally relax. This summer past, I had some things to do that couldn't be put off. I arrived three days late, and the weather was so warm and even and beguiling that I decided to stay on by myself for a day or two after the others left. There was a small flat lawn in front of the shack, and I made up my mind to spend at least three or four hours at short putts. That was how I happened to have the putting iron next to my bed.

The first day I was alone, I opened a can of beans and a can of beer for my supper. Then I lay down in my bed with *Life on the Mississippi*, a pack of cigarettes, and an eight-ounce chocolate bar. There was nothing I had to do, no telephone, no demands and no newspapers. At that moment, I was about as contented as any man can be in these nervous times.

It was still light outside, and enough light came through the window above my head for me to read by. I was just reaching for a fresh cigarette, when I looked up and saw it on the foot of my bed. The edge of my hand was touching the golf club, and with a single motion I swept the club over and down, struck it a savage and accurate blow, and killed it. That was what I referred to before. Whatever kind of a man I am, I react as a man does. I think that any

man, black, white or yellow, in China, Africa or Russia, would have done the same thing.

First I found that I was sweating all over, and then I knew I was going to be sick. I went outside to vomit, recalling that this hadn't happened to me since 1943, on my way to Europe on a tub of a Liberty Ship. Then I felt better and was able to go back into the shack and look at it. It was quite dead, but I had already made up my mind that I was not going to sleep alone in this shack.

I couldn't bear to touch it with my bare hands. With a piece of brown paper, I picked it up and dropped it into my fishing creel. That, I put into the trunk case of my car, along with what luggage I carried. Then I closed the door of the shack, got into my car and drove back to New York. I stopped once along the road, just before I reached the Thruway, to nap in the car for a little over an hour. It was almost dawn when I reached the city, and I had shaved, had a hot bath and changed my clothes before my wife awoke.

During breakfast, I explained that I was never much of a hand at the solitary business, and since she knew that, and since driving alone all night was by no means an extraordinary procedure for me, she didn't press me with any questions. I had two eggs, coffee and a cigarette. Then I went into my study, lit another cigarette, and contemplated my fishing creel, which sat upon my desk.

My wife looked in, saw the creel, remarked that it had too ripe a smell, and asked me to remove it to the basement.

"I'm going to dress," she said. The kids were still at camp. "I have a date with Ann for lunch—I had no idea you were coming back. Shall I break it?"

"No, please don't. I can find things to do that have to be done."

Then I sat and smoked some more, and finally I called the museum, and asked who the curator of insects was. They told me his name was Bertram Lieberman, and I asked to talk to him. He had a pleasant voice. I told him that my name was Morgan, and that I was a writer, and he politely indicated that he had seen my name and read something that I had written. That is formal procedure when a writer introduces himself to a thoughtful person.

I asked Lieberman if I could see him, and he said that he had a busy morning ahead of him. Could it be tomorrow?

"I am afraid it has to be now," I said firmly.

"Oh? Some information you require?"

"No. I have a specimen for you."

"Oh?" The "oh" was a cultivated, neutral interval. It asked and answered and said nothing. You have to develop that particular "oh."

"Yes. I think you will be interested."

"An insect?" he asked mildly.

"I think so."

"Oh? Large?"

"Quite large," I told him.

"Eleven o'clock? Can you be here then? On the main floor, to the right, as you enter."

"I'll be there," I said.

"One thing—dead?"

"Yes, it's dead."

"Oh?" again. "I'll be happy to see you at eleven o'clock, Mr. Morgan."

My wife was dressed now. She opened the door to my study and said, "Do get rid of that fishing creel. It smells."

"Yes, darling. I'll get rid of it."

"I should think you'd want a nap after driving all night."

"Funny, but I'm not sleepy," I said. "I think I'll drop around to the museum."

My wife said that was what she liked about me, that I never tired of places like museums, police courts and third-rate night clubs.

Anyway, aside from a racetrack, a museum is the most interesting and unexpected place in the world. It was unexpected to have two other men waiting for me, along with Mr. Lieberman, in his office. Lieberman was a skinny, sharp-faced man of about sixty. The government man, Fitzgerald, was small, dark-eyed, and wore gold-rimmed glasses. He was very alert, but he never told me what part of the government he represented. He just said "we," and it meant the government. Hopper, the third man, was comfortable-looking, pudgy, and genial. He was a United States senator with an interest in entomology, although before this

morning I would have taken better than even money that such a thing not only wasn't, but could not be.

The room was large and square and plainly furnished, with shelves and cupboards on all walls.

We shook hands, and then Lieberman asked me, nodding at the creel, "Is that it?"

"That's it."

"May I?"

"Go ahead," I told him. "It's nothing that I want to stuff for the parlor. I'm making you a gift of it."

"Thank you, Mr. Morgan," he said, and then he opened the creel and looked inside. Then he straightened up, and the other two men looked at him inquiringly.

He nodded. "Yes."

The senator closed his eyes for a long moment. Fitzgerald took off his glasses and wiped them industriously. Lieberman spread a piece of plastic on his desk, and then lifted the thing out of my creel and laid it on the plastic. The two men didn't move. They just sat where they were and looked at it.

"What do you think it is, Mr. Morgan?" Lieberman asked.

"I thought that was your department."

"Yes, of course. I only wanted your impression."

"An ant. That's my impression. It's the first time I saw an ant fourteen, fifteen inches long. I hope it's the last."

"An understandable wish." Lieberman nodded.

Fitzgerald said to me, "May I ask how you killed it?"

"With an iron. A golf club, I mean. I was doing a little fishing with some friends up at St. Regis in the Adirondacks, and I brought the iron for my short shots. They're the worst part of my game, and when my friends left, I intended to stay on at our shack and do four or five hours of short putts. You see—"

"There's no need to explain." Hopper smiled, a trace of sadness on his face. "Some of our very best golfers have the same trouble."

"I was lying in bed, reading, and I saw it at the foot of my bed. I had the club—"

"I understand." Fitzgerald nodded.

"You avoid looking at it," Hopper said.

"It turns my stomach."

"Yes—yes, I suppose so."

Lieberman said, "Would you mind telling us why you killed it, Mr. Morgan?"

"Why?"

"Yes—why?"

"I don't understand you," I said. "I don't know what you're driving at."

"Sit down, please, Mr. Morgan." Hopper nodded. "Try to relax. I'm sure this has been very tiring."

"I still haven't slept. I want a chance to dream before I say how tiring."

"We are not trying to upset you, Mr. Morgan," Lieberman said. "We do feel, however, that certain aspects of this are very important. That is why I am asking you why you killed it. You must have had a reason. Did it seem about to attack you?"

"No."

"Or make any sudden motion toward you?"

"No. It was just there."

"Then why?"

"This is to no purpose," Fitzgerald put in. "We know why he killed it."

"Do you?"

"The answer is very simple, Mr. Morgan. You killed it because you are a human being."

"Oh?"

"Yes. Do you understand?"

"No, I don't."

"Then why did you kill it?" Hopper put in.

"I was scared to death. I still am, to tell the truth."

Lieberman said, "You are an intelligent man, Mr. Morgan. Let me show you something." He then opened the doors of one of the wall cupboards, and there were eight jars of formaldehyde and in each jar a specimen like mine—and in each case mutilated by the violence of its death. I said nothing. I just stared.

Lieberman closed the cupboard doors. "All in five days." He shrugged.

"A new race of ants," I whispered stupidly.

"No. They're not ants. Come herel!" He motioned me to

the desk and the other two joined me. Lieberman took a set of dissecting instruments out of his drawer, used one to turn the thing over and then pointed to the underpart of what would be the thorax in an insect.

"That looks like part of him, doesn't it, Mr. Morgan?"

"Yes, it does."

Using two of the tools, he found a fissure and pried the bottom apart. It came open like the belly of a bomber; it was a pocket, a pouch, a receptacle that the thing wore, and in it were four beautiful little tools or instruments or weapons, each about an inch and a half long. They were beautiful the way any object of functional purpose and loving creation is beautiful—the way the creature itself would have been beautiful, had it not been an insect and myself a man. Using tweezers, Lieberman took each instrument off the brackets that held it, offering each to me. I took each one, felt it, examined it, and put it down.

I had to look at the ant now, and I realized that I had not truly looked at it before. We don't look carefully at a thing that is horrible or repugnant to us. You can't look at anything through a screen of hatred. But now the hatred and the fear was dilute, and as I looked, I realized it was not an ant. It was nothing that I had ever seen or dreamed of.

All three men were watching me, and suddenly I was on the defensive. "I didn't know! What do you expect when you see an insect that size?"

Lieberman nodded.

"What in the name of God is it?"

From his desk, Lieberman produced a bottle and four small glasses. He poured and we drank it neat. I would not have expected him to keep good Scotch in his desk.

"We don't know," Hopper said. "We don't know what it is."

Lieberman pointed to the broken skull, from which a white substance oozed. "Brain material—a great deal of it."

"It could be a very intelligent creature," Hopper nodded.

Lieberman said, "It is an insect in developmental structure. We know very little about intelligence in our insects. It's not the same as what we call intelligence. It's a collective phenomenon—as if you were to think of the component

parts of our bodies. Each part is alive, but the intelligence is a result of the whole. If that same pattern were to extend to creatures like this one—"

"Suppose it were?"

"What?"

"The kind of collective intelligence you were talking about."

"Oh? Well, I couldn't say. It would be something beyond our wildest dreams. To us—well, what we are to an ordinary ant."

"I don't believe that," I said shortly, and Fitzgerald, the government man, told me quietly, "Neither do we. We guess."

"If it's that intelligent, why didn't it use one of those weapons on me?"

"Would that be a mark of intelligence?" Hopper asked mildly.

"Perhaps none of these are weapons," Lieberman said.

"Don't you know? Didn't the others carry instruments?"

"They did," Fitzgerald said shortly.

"Why? What were they?"

"We don't know," Lieberman said.

"But you can find out. We have scientists, engineers—good God, this is an age of fantastic instruments. Have them taken apart!"

"We have."

"Then what have you found out?"

"Nothing."

"Do you mean to tell me," I said, "that you can find out nothing about these instruments—what they are, how they work, what their purpose is?"

"Exactly." Hopper nodded. "Nothing, Mr. Morgan. They are meaningless to the finest engineers and technicians in the United States. You know the old story—suppose you gave a radio to Aristotle? What would he do with it? Where would he find power? And what would he receive with no one to send? It is not that these instruments are complex. They are actually very simple. We simply have no idea of what they can or should do."

"But there must be a weapon of some kind."

"Why?" Lieberman demanded. "Look at yourself, Mr. Morgan—a cultured and intelligent man, yet you cannot conceive of a mentality that does not include weapons as a prime necessity. Yet a weapon is an unusual thing, Mr. Morgan. An instrument of murder. We don't think that way, because the weapon has become the symbol of the world we inhabit. Is that civilized, Mr. Morgan? Or is the weapon and civilization in the ultimate sense incompatible? Can you imagine a mentality to which the concept of murder is impossible—or let me say absent. We see everything through our own subjectivity. Why shouldn't some other—this creature, for example—see the process of mentation out of his subjectivity? So he approaches a creature of our world—and he is slain. Why? What explanation? Tell me, Mr. Morgan, what conceivable explanation could we offer a wholly rational creature for this—" pointing to the thing on his desk. "I ask you most seriously. What explanation?"

"An accident?" I muttered.

"And the eight jars in my cupboard? Eight accidents?"

"I think, Dr. Lieberman," Fitzgerald said, "that you can go a little too far in that direction."

"Yes, you would think so. It's a part of your own background. Mine is as a scientist. As a scientist, I try to be rational when I can. The creation of a structure of good and evil, or what we call morality and ethics, is a function of intelligence—and unquestionably the ultimate evil may be the destruction of conscious intelligence. That is why, so long ago, we at least recognized the injunction, 'Thou shalt not kill' even if we never gave more than lip service to it. But to a collective intelligence, such as this might be a part of, the concept of murder would be monstrous beyond thought."

I sat down and lit a cigarette. My hands were trembling. Hopper apologized. "We have been rather rough with you, Mr. Morgan. But over the past five days, eight other people have done just what you did. We are caught in the trap of being what we are."

"But tell me—where do these things come from?"

"It doesn't matter where they come from," Hopper said hopelessly. "Perhaps from another planet—perhaps from inside this one—or the Moon or Mars. That doesn't matter.

Fitzgerald thinks they come from a smaller planet, because their movements are apparently slow on Earth. But Dr. Lieberman thinks that they move slowly because they have not discovered the need to move quickly. Meanwhile, they have the problem of murder and what to do with it. Heaven knows how many of them have died in other places—Africa, Asia, Europe.”

“Then why don’t you publicize this? Put a stop to it before it’s too late!”

“We’ve thought of that.” Fitzgerald nodded. “What then—panic, hysteria, charges that this is the result of the atom bomb? We can’t change. We are what we are.”

“They may go away,” I said.

“Yes, they may.” Lieberman nodded. “But if they are without the curse of murder, they may also be without the curse of fear. They may be social in the highest sense. What does society do with a murderer?”

“There are societies that put him to death—and there are other societies that recognize his sickness and lock him away, where he can kill no more.” Hopper said. “Of course, when a whole world is on trial, that’s another matter. We have atom bombs now and other things, and we are reaching out to the stars—”

“I’m inclined to think that they’ll run,” Fitzgerald put in. “They may just have that curse of fear, Doctor.”

“They may,” Lieberman admitted. “I hope so.”

But the more I think of it the more it seems to me that fear and hatred are the two sides of the same coin. I keep trying to think back, to re-create the moment when I saw it standing at the foot of my bed in the fishing shack. I keep trying to drag out of my memory a clear picture of what it looked like, whether behind that chitinous face and the two gently waving antennae there was any evidence of fear and anger. But the clearer the memory becomes, the more I seem to recall a certain wonderful dignity and repose. Not fear and not anger.

And more and more, as I go about my work, I get the feeling of what Hopper called “a world on trial.” I have no sense of anger myself. Like a criminal who can no longer live with himself, I am content to be judged.

A ROSE BY OTHER NAME

by Christopher Anvil

from Astounding Science Fact & Fiction

Although the devices have ranged from magic formulae and well-bound voices to satellites and cybernetics, the essential criticism leveled at *The Way Things Are* (and *Where Are They Going?*) by the authors so far, contains one common theme: Our failures are those of communication.

Sometimes the failure is one of intent, sometimes of ability. There may be perception without comprehension, or comprehension with no power of articulation. The missing link may be mechanical, semantic, emotional. Often it is no more than the value-deafness that comes of mistaking volume for information. But over and again the trouble seems to lie in some part of the semantic act: the process of abstracting, symbolizing, and reciprocally conveying, mutually meaningful symbols.

Mr. Anvil here proposes a hair of the dog....

A tall man in a tightly belted trenchcoat carried a heavy brief case toward the Pentagon building.

A man in a black overcoat strode with a bulky suitcase toward the Kremlin.

A well-dressed man wearing a dark-blue suit stepped out of a taxi near the United Nations building, and paid the driver. As he walked away, he leaned slightly to the right, as if the attaché case under his left arm held lead instead of paper.

On the sidewalk nearby, a discarded newspaper lifted in the wind to lie face-up before the entrance to the building. Its big black headline read: U. S. WILL FIGHT!

A set of diagrams in this newspaper showed United States and Soviet missiles, with comparisons of ranges, payloads,

and explosive powers, and with the Washington Monument sketched into the background to give an idea of their size.

The well-dressed man with the attaché case strode across the newspaper to the entrance, his heels ripping the tables of missile comparisons as he passed.

Inside the building, the Soviet delegate was at this moment saying:

"The Soviet Union is the most scientifically advanced nation on Earth. The Soviet Union is the most powerful nation on Earth. It is not up to you to say to the Soviet Union, 'Yes' or 'No.' The Soviet Union has told you what it is going to do. All I can suggest for you is, you had better agree with us."

The United States delegate said, "That is the view of the Soviet government?"

"That is the view of the Soviet government."

"In that case, I will have to tell you the view of the United States government. If the Soviet Union carries out this latest piece of brutal aggression, the United States will consider it a direct attack upon its own security. I hope you know what this means."

There was an uneasy stir in the room.

The Soviet delegate said slowly, "I am sorry to hear you say that. I am authorized to state that the Soviet Union will not retreat on this issue."

The United States delegate said, "The position of the United States is already plain. If the Soviet Union carries this out, the United States will consider it as a direct attack. There is nothing more I can say."

In the momentary silence that followed, a guard with a rather stuporous look opened the door to let in a well-dressed man, who was just sliding something back into his attaché case. This man glanced thoughtfully around the room, where someone was just saying:

"Now what do we do?"

Someone else said hesitantly, "A conference, perhaps?"

The Soviet delegate said coolly, "A conference will not settle this. The United States must correct its provocative attitude."

The United States delegate looked off at a distant wall.

"The provocation is this latest Soviet aggression. All that is needed is for the Soviet Union not to do it."

"The Soviet Union will not retreat in this issue."

The United States delegate said, "The United States will not retreat on this issue."

There was a dull silence that lasted for some time.

As the United States and Soviet delegates sat unmoving, there came an urgent plea, "Gentlemen, doesn't anyone have an idea? However implausible?"

The silence continued long enough to make it plain that now no one could see any way out.

A well-dressed man in dark blue, carrying an attaché case, stepped forward and set the case down on a table with a solid *clunk* that riveted attention.

"Now," he said, "we are in a real mess. Very few people on Earth want to get burned alive, poisoned, or smashed to bits. We don't want a ruinous war. But from the looks of things, we're likely to get one whether we want it or not.

"The position we are in is like that of a crowd of people locked in a room. Some of us have brought along for our protection large savage dogs. Our two chief members have trained tigers. This menagerie is now straining at the leash. Once the first blow lands, no one can say where it will end.

"What we seem to need right now is someone with skills of a lion tamer. The lion tamer controls the animals by understanding, timing, and *distraction*."

The United States and Soviet delegates glanced curiously at each other. The other delegates shifted around with puzzled expressions. Several opened their mouths as if to interrupt, glanced at the United States and Soviet delegates, shut their mouths and looked at the attaché case.

"Now," the man went on, "a lion tamer's tools are a pistol, a whip, and a chair. They are used to distract. The pistol contains blank cartridges, the whip is snapped above the animal's head, and the chair is held with the points of the legs out, so that the animal's gaze is drawn first to one point, then another, as the chair is shifted. The sharp noise of gun and whip distract the animal's attention. So does the chair. And so long as the animal's attention is distracted,

its terrific power isn't put into play. This is how the lion tamer keeps peace.

"The thought processes of a war machine are a little different from the thought processes of a lion or a tiger. But the principle is the same. What we need is something corresponding to the lion tamer's whip, chair, and gun."

He unsnapped the cover of the attaché case, and lifted out a dull gray slab with a handle on each end, several dials on its face, and beside them a red button and a blue button.

"It's generally known," he said, looking around at the scowling delegates, "that certain mental activities are associated with certain areas of the brain. Damage a given brain area, and you disrupt the corresponding mental action. Speech may be disrupted, while writing remains. A man who speaks French and German may lose his ability to speak French, but still be able to speak German. These things are well-known, but not generally used. Now, who knows if, perhaps, there is a special section of the brain which handles the vocabulary *related to military subjects?*"

He pushed in the blue button.

The Soviet delegate sat up straight. "What is that button you just pushed?"

"A demonstration button. It actuates when I release it."

The United States delegate said, "Actuates *what?*"

"I will show you, if you will be patient just a few minutes."

"What's this about brain areas? We can't open the brain of every general in the world."

"You won't have to. Of course, you have heard of resonant frequencies and related topics. Take two tuning forks that vibrate at the same rate. Set one in vibration, and the other across the room will vibrate. Soldiers marching across a bridge break step, lest they start the bridge in vibration and bring it down. The right note on a violin will shatter a glass. Who knows whether minute electrical currents in a particular area of the brain, associated with a certain characteristic mental activity, may not tend to induce a similar activity in the corresponding section of another brain? And, in that case, if it were possible to induce a sufficiently *strong* current, it might actually overload that particular—"

The United States delegate tensely measured with his eyes the distance to the gray slab on the table.

The Soviet delegate slid his hand toward his waistband.

The man who was speaking took his finger from the blue button.

The Soviet delegate jerked out a small black automatic. The United States delegate shot from his chair in a flying leap. Around the room, men sprang to their feet. There was an instant of violent activity.

Then the automatic fell to the floor. The United States delegate sprawled motionless across the table. Around the room, men crumpled to the floor in the nerveless fashion of the dead drunk.

Just one man remained on his feet, leaning forward with a faintly dazed expression as he reached for the red button. He said, "You have temporarily overloaded certain mental circuits, gentlemen. I have been protected by a . . . you might say, a jamming device. You will recover from the effects of *this* overload. The next one you experience will be a different matter. I am sorry, but there are certain conditions of mental resonance that the human race can't afford at the moment." He pressed the red button.

The United States delegate, lying on the table, experienced a momentary surge of rage. In a flash, it was followed by an intensely clear vision of the map of Russia, the polar regions adjoining it, and the nations along its long southern border. Then the map was more than a map, as he saw the economic complexes of the Soviet Union, and the racial and national groups forcibly submerged by the central government. The strong and weak points of the Soviet Union emerged, as in a transparent anatomical model of the human body laid out for an operation.

Not far away, the Soviet delegate could see the submarines off the coasts of the United States, the missiles arcing down the vital industrial areas, the bombers on their long one-way missions, and the unexpected land attack to settle the problem for once and for all. As he thought, he revised the plan continuously, noting an unexpected American strength here, and the possibility of a dangerous counter blow there.

In the minds of another delegate, Great Britain balanced off the United States against the Soviet Union, then by a series of carefully planned moves acquired the moral leadership of a bloc of uncommitted nations. Next, with this as a basis for maneuver—

Another delegate saw leading a Europe small in area but immense in productive power. After first isolating Britain—

At nearly the same split fraction of an instant, all these plans became complete. Each delegate saw his nation's way to the top with a dazzling, more than human clarity.

And then there was an impression like the brief glow of an overloaded wire. There was a sensation similar to pain.

This experience repeated itself in a great number of places around the globe.

In the Kremlin, a powerfully built marshal blinked at the members of his staff.

"Strange. For just a minute there, I seemed to see—" He shrugged, and pointed at the map. "Now, along the North German Plain here, where we intend to . . . to—" He scowled, groping for a word. "Hm-m-m. Where we want to . . . ah . . . destabilize the . . . the ridiculous NATO protective counterproposals—" He stopped, frowning.

The members of his staff straightened up and looked puzzled. A general said, "Marshal, I just had an idea. Now, one of the questions is: Will the Americans . . . ah— Will they . . . hm-m-m—" He scowled, glanced off across the room, bit his lip, and said, "Ah. . . what I'm trying to say is: Will they forcibly demolecularize Paris, Rome, and other Allied centers when we . . . ah . . . inundate them with the integrated hyperarticulated elements of our—" He cut himself off suddenly, a look of horror on his face.

The marshal said sharply, "What are you talking about —'demolecularize'? You mean, will they . . . hm-m-m . . . deconstitute the existent structural pattern by application of intense energy of nuclear fusion?" He stopped and blinked several times as this last sentence played itself back in his mind.

Another member of the staff spoke up hesitantly, "Sir, I'm not exactly sure what you have in mind, but I had a

thought back there that struck me as a good workable plan to deconstitutionalize the whole American government in five years by unstructuring their political organization through intrasocietal political action simultaneously on all levels. Now—"

"Ah," said another general, his eyes shining with an inward vision, "I have a better plan. Banana embargo. Listen—"

A fine beading of perspiration appeared on the marshal's brow. It had occurred to him to wonder if the Americans had somehow just landed the ultimate in foul blows. He groped mentally to try to get his mind back on the track.

At this moment, two men in various shades of blue were sitting by a big globe in the Pentagon building staring at a third man in an olive-colored uniform. There was an air of embarrassment in the room.

At length, one of the men in blue cleared his throat. "General, I hope your plans are based on something a little clearer than that. I don't see how you can expect us to cooperate with you in recommending *that* kind of a thing to the President. But now, I just had a remarkable idea. It's a little unusual; but if I do say so, it's the kind of thing that can clarify the situation instead of sinking it in hopeless confusion. Now, what I propose is that we immediately proceed to layerize the existent trade routes in *depth*. This will counteract the Soviet potential nullification of our sea-borne surface-level communications through their underwater superiority. Now, this involves a fairly unusual concept. But what I'm driving at—"

"Wait a minute," said the general, in a faintly hurt tone. "You didn't get my point. It may be that I didn't express it quite as I intended. But what I mean is, we've got to really bat those bricks all over the lot. Otherwise, there's bound to be trouble. Look—"

The man in Air Force blue cleared his throat. "Frankly, I've always suspected there was a certain amount of confusion in both your plans. But I never expected anything like this. Fortunately, I have an idea—"

At the United Nations, the American and Russian delegates were staring at the British delegate, who was saying methodically, "Agriculture, art, literature, science, engineering, medicine, sociology, botany, zoology, beekeeping, tinsmithing, speleology, wa . . . w . . . milita . . . mili . . . mil . . . hm-m-m . . . sewing, needlework, navigation, law, business, barrister, batt . . . bat . . . ba— Can't say it."

"In other words," said the United States delegate, "we're mentally hamstrung. Our vocabulary is gone as regards . . . ah— That is, we can talk about practically anything, except subjects having to do with . . . er . . . strong disagreements."

The Soviet delegate scowled. "This is bad. I just had a good idea, too. Maybe—" He reached for pencil and paper.

A guard came in scowling. "Sorry, sir. There's no sign of any such person in the building now. He must have gotten away."

The Soviet delegate was looking glumly at his piece of paper. "Well," he said, "I do not think I would care to trust the safety of my country to this method of communication."

Staring up at him from the paper were the words:

"Instructions to head man of Forty-fourth Ground-Walking Club. Seek to interpose your club along the high ground between the not-friendly-to-us fellows and the railway station. Use repeated strong practical urging procedures to obtain results desired."

The United States delegate had gotten hold of a typewriter, slid in a piece of paper, typed rapidly, and was now scowling in frustration at the result.

The Soviet delegate shook his head. "What's the word for it? We've been bugged. The section of our vocabulary dealing with . . . with . . . you know what I mean . . . that section has been burned out."

The United States delegate scowled. "Well, we can still stick pins in maps and draw pictures. Eventually we can get across what we mean."

"Yes, but that is no way to run a wa . . . wa . . . a strong disagreement. We will have to build up a whole new vocabulary to deal with the subject."

The United States delegate thought it over, and nodded. "All right," he said. "Now, look. If we're each going to have to make new vocabularies, do we want to end up with ... say ... sixteen different words in sixteen different languages all for the same thing? Take a ... er ... 'strong disagreement.' Are you going to call it 'gosnik' and we call it 'gack' and the French call it 'gouk' and the Germans call it 'Gunck'? And then we have to have twenty dozen different sets of dictionaries and hundreds of interpreters so we can merely get some idea what each other is talking about?"

"No," said the Soviet delegate grimly. "Not that. We should have an international commission to settle that. Maybe there, at least, is something we can agree on. Obviously, it is to everyone's advantage not to have innumerable new words for the same thing. Meanwhile, perhaps ... ah ... perhaps for now we had better postpone a final settlement of the present difficulty."

Six months later, a man wearing a tightly belted trench-coat approached the Pentagon building.

A man carrying a heavy suitcase strode along some distance from the Kremlin.

A taxi carrying a well-dressed man with an attaché case cruised past the United Nations building.

Inside the United Nations building, the debate was getting hot. The Soviet delegate said angrily:

"The Soviet Union is the most scientifically advanced and unquestionably the most gacknik nation on Earth. The Soviet Union will not take dictation from anybody. We have given you an extra half-year to make up your minds, and now we are going to put it to you bluntly:

"If you want to cush a gack with us over this issue, we will mongel you. We will grock you into the middle of next week. No running dog of a capitalist imperialist will get out in one piece. You may hurt us in the process, but *we* will absolutely bocket *you*. The day of decadent capitalism is *over*."

A rush of marvelous dialectic burst into life in the Soviet delegate's mind. For a split instant he could see with

unnatural clarity not only why, but how, his nation's philosophy was bound to emerge triumphant—if handled properly—and even without a ruinous gack, too.

Unknown to the Soviet delegate, the United States delegate was simultaneously experiencing a clear insight into the stunning possibilities of basic American beliefs, which up to now had hardly been tapped at all.

At the same time, other delegates were sitting straight, their eyes fixed on distant visions.

The instant of dazzling certainty burnt itself out.

"Yes," said the Soviet delegate, as if in a trance. "No need to even cuss a gack. Inevitably, victory must go to communi . . . commu . . . comm . . . com—" He stared in horror.

The American delegate shut his eyes and groaned. "Capitalis . . . capita . . . capi . . . cap . . . rugged individu . . . rugged indi . . . rugge . . . rug . . . rug—" He looked up. "Now we've got to have *another* conference. And then, on top of that, we've got to somehow cram our new definitions down the throats of the thirty per cent of the people they *don't* reach with their device."

The Soviet delegate felt for his chair and sat down heavily. "Dialectic materia . . . dialecti . . . dial . . . dia—" He put his head in both hands and drew in a deep shuddering breath.

The British delegate was saying, "Thin red li . . . thin re . . . thin . . . thin— This *hurts*."

"Yes," said the United States delegate. "But if this goes on, we may end up with a complete, new, unified language. Maybe that's the idea."

The Soviet delegate drew in a deep breath and looked up gloomily. "Also, this answers one long-standing question."

"What's that?"

"One of your writers asked it long ago: 'What's in a name?' "

The delegates all nodded with sickly expressions.

"Now we know."

ENCHANTMENT

by Elizabeth Emmett

from *The Saturday Evening Post*

No matter how indistinct the boundary between fantasy and science fiction, there are clearly defined areas on either side—and this story is undoubtedly "pure fantasy," quite outside the limits of what I ordinarily call "SF" . . .

When she first saw the house, the spell of April lay upon it. Rain had changed to mist during the long drive. At journey's end the sun was breaking through the clouds, and the house, still moist as from a morning bath, stood exposed before her, draped in green ivy.

She pulled the car to an abrupt halt. That castlelike structure had no more place in an American setting than Pan in its groves and woods; and yet, at the end of a drive through woods silent except for woodland sounds, it seemed as natural as the white spire of a Baptist church in a New England village.

While she stared, a gnarled and sourish-looking man appeared. She put the car in motion and drove to the entrance. He came forward with a gesture of hand to grizzled head. "You'll be Miss Reed, no doubt?"

He took her bags, and she followed him into the house where she expected to spend several weeks alone, except for this caretaker and his wife. She had felt little curiosity as to what sort of place she was coming to. An old man had died, and among his assets was a library. The executor of the estate had sought a librarian with the proper credentials for cataloguing it before putting it up for sale. She had got the job.

Where she worked never mattered much. Regardless of what place she was in she would always be slightly out of place. To her, books were kinder than life. She found her

acquaintances, forged her friendships among the people created by man instead of by God.

Never, however, had she worked in a castle. Small though it might seem in association with the word, its empty rooms might by their very silence prove distracting.

The living room was a joy forever. She could look down upon it as she worked in the book-lined gallery that swept above it on two sides. If she paused in her work, she had but to swing her chair and see, reflected in a huge mirror below, the terrace upon which the living room opened, and beyond the terrace a world occupied only by nature.

She had been there several days, making a preliminary survey of the library, before she climbed the four flights of stone steps to the tower. The person who came down was not the same person who went up.

At first she thought it was the river that worked the transformation. Seen from the tower, it might have been time, without beginning and without end, flowing from and to eternity. To watch it was like being hypnotized, surrendering the mind to the river as a swimmer might surrender the body. On and on, her mind drifted in musing such as she rarely had allowed it, because she could not afford the habit. Suddenly she became aware that at some point she had left the river and was on the verge of a strange country.

The complaint of aching feet brought her back to a realization that she had been standing an unconscionably long time. And with reality came a feeling of desolation such as Eve must have felt when looking back at the Eden from which she had been expelled.

I don't believe opium ever wafted anyone into a greater state of happiness, she thought as she went slowly, reluctantly down the stairs.

The next day she came upon a privately printed book. Its one illustration showed a winged animal of unidentifiable species, bearing a shadowy something upon its back as it plunged through waves of mist. Its destination was Ultima Thule, a region that, as she saw as soon as she began to read, made Olympus seem little better than a county fair for the gods, and the Elysian Fields but a country club for poets. This was paradise, without God, without cherub

or seraph, without recording angel to grant permit for entry. One laid the body aside as one might lay aside clothes preparatory to bathing; but she gathered that it took superhuman effort for the self, thus stripped, to breast the waves or surmount the barriers that intervened between vision and attainment.

Reluctantly she laid the book aside and resolutely she turned to work. But something tapped persistently at her mind for notice. She picked up the book and read on its cover, *ULTIMA THULE* BY THOMAS WENTWORTH WOODS.

Thomas Woods was the man whose library had brought her to this place of solitude. From that high tower his eyes, too, must have watched the river which might be time flowing on to eternity. *From that tower too—*

She could not get her mind back to cataloguing books. She carried a chair up the four flights of stairs and placed it in front of one of the windows, deeply recessed in the thick walls of stone. She spent the morning there reading the book and thinking about it, feeling the presence of Thomas Woods, who had put such terribly beautiful visions on paper. While reading, she was tantalized by the feeling that its meaning escaped her even while it enthralled and frightened her. It represented no Faustlike deal with Satan; yet it recognized no deity beyond that of self. What self did, it did unaided, even to creating paradise. But when she laid the book aside and let her mind drift with the river, the meaning of the words became crystal clear—until something again called her back to reality.

The noon hour was nearly over. Like one stealing from a liaison, she made her way down softly, carefully preventing her shoes from clicking against stone. She shrank from the thought that anyone should guess that all the morning she had been neglecting work for an excursion into what was little more than poppy-land.

That projected a thought—had Thomas Woods been an opium addict? It was disclaimed by the tart second question, *Am I?* After luncheon she returned to the tower to test the experiment of trying to maintain consciousness of her own practical personality while crossing the borderland between reality and nonreality.

She found that the latter state was preceded by a slow transformation of the outward sense—in somewhat the same manner as the sky, with its drifting clouds and dying splendor of sunset, seems to become the sea with islands shaping and reshaping, and colors paling or deepening as they merge. Gradually the scene she looked upon became something fascinatingly terrifying, because its beauty was like nothing she had ever seen before. Then came complete submergence of mind until brought back to earth by some disturbance, probably a manifestation of physical discomfort. And there was left memory only of ecstasy and a craving to recapture it.

One day, while in the preliminary state so carefully observed, she heard steps. Was the caretaker spying on her? Her guilty conscience had suggested that he and his wife knew that she was not spending much time in the library. The steps ceased. Had she imagined them? Probably—but she ought to be fortified with material at hand to give the appearance of working, if necessary. Next morning she summoned the caretaker.

“The light is so much better in the tower; I think I will take up some books to work on. Can you bring a table there for me?”

The air in the tower was wonderful. Its peculiar ozone struck her for the first time as she surveyed her sanctuary. Here she would work. She sat down by the table which had been placed in front of a window more highly vaulted than the others and broader at the base. It had a platform-like step in front of it.

She resolutely set to work, but she found that whenever she looked up, there was something tantalizing about the view, cut off by the deep embrasures at just a point where the scenery seemed to verge with a lovelier blue. Irresistibly she was led to the broad step. Irresistibly she mounted it. The window ledge, unlike the other, was wide enough as well as broad enough to sit on comfortably. Turned up against each wall were thickly padded mats. She tipped them down and had a cushioned seat.

She closed her eyes and, with the shallow breathing that

she was always a little conscious of in the tower, drank in the ozone that brought reward exceeding that of nepenthe. She did not sleep. Yet she seemed to return to reality as from a dream and with the feeling that she had been roused therefrom by a sound. She sat erect, listening. There were steps on the stairs again slow and halting. Her first impulse was to get quickly to the table so as to seem at work if anybody came in; but all sound had ceased. She could not tell how long she sat there, looking straight at the entrance to the tower, with the feeling that she was looking right through someone standing there, while that somebody looked her over. And then she heard the steps again. Going down.

It's the solitude, she thought. I ought to pack up and leave, return the money I have not earned and live at ease again with conscience.

But, instead of beginning straightway to transmute thought into decision, she turned her eyes toward the outside world—and almost swooned. It was like looking upon life on a different planet. Hills, vales, earth, sky and water were there. But they seemed to float in a thin transparent vapor, or to be mirrored in a lake that could be nothing but mirage. All her being tingled with ecstasy. Paradise could be no lovelier. Though there was no way by which she could reach the ethereal country, she felt as if she were the one human being to whom a glimpse of it had been vouchsafed.

But, disturbingly, a sentence from Thomas Woods's book intruded as distinctly as if somebody had spoken it aloud. *But he who sees paradise with earth-bound eyes sheds hope of future paradise, because it has been given him to know that there is no reality beyond what the mind mirrors.*

So, Thomas Woods had sat in this window enclosure. What sort of man had he been? What had he looked like? She wished she knew more about him. She recalled the portrait opposite the gallery and how it drew the eye down when there, and upward when in the living room. It had impressed her, because it was the only painting in the room. Vaguely she had thought of it as something of such value that the eccentric—for everything proclaimed him

that—had considered it worthy of the enhancement of solitariness. Could he have assigned a portrait of himself to such distinction?

She went downstairs to the gallery and looked across to the full-length portrait. The face was not remarkable; but the total effect of the painting was one of indestructible vitality.

She questioned the caretaker when he brought her lunch.

"That's a portrait of Mr. Woods, I suppose," she said.

He turned about, his face transfixed with astonishment that then gave way to sullenness. "Are you trying a joke on me?" he asked.

"A joke? Why should I?"

He gave her a long, curious look. "Do you mean to say you don't know?"

"Know what?"

He did not answer that. "No, it's not the master," he said and went out.

She worked in the library the rest of the day. *One of my few days of honest work*, she thought; for she extended her labors so far into the evening that the late beginning was made up for. She lingered on, even after she had reached a point of tiredness that made meticulous work impossible. She sought a book to read, but was conscious of eyestrain and dared not ignore it. Yet she still did not want to go to bed. Her first reaction to the bedroom had been recoil from the impression of a cell—as if one were supposed to atone in a room of austerity for the sensuous pleasure afforded by other rooms. The feeling had retreated in the succession of nights; but now it advanced again, and she thought of the thick stone walls as of a tomb. The smallness of the room, the pale light which the deeply recessed window admitted during day, the starkly bright electric light that seemed to strive to push back walls that pressed in upon the narrow bed and strictly necessary furniture, gave her a feeling that when she closed the door she was shutting herself forever away from life.

Nevertheless she went along the gallery to her room. She switched on the light and undressed; but in spite of mental fatigue, her mind was restless. She put on a dressing gown

and turned back to the gallery. A pale radiance flowed over it, drifting upward from the big room below, which was so clearly, though softly, illuminated that every chair, table and everything at floor level stood out as distinctly as in daytime. And still the light poured in through the French windows that opened upon the terrace. With the light on, she had not noticed that the moon was rising; and now, with moonlight flooding the room below, she felt as if floating on a silvery sea from which she had just risen. Higher and brighter the light rose. Looking across the gallery, she saw the portrait, transfigured until the ordinarily good-looking face seemed of unearthly beauty.

Almost in the same breath came gladness that she was wearing the rose-colored gown—more becoming than any of her dresses—and a thud of pain that he could not see her and would not notice her if he could. She could not bear the ache of the ifs that pushed between them—if he could arise from the dead, if she could discard ten years and match youth with youth, if he could come down from the frame, if she could be transformed into an Isolde, in place of a person that no one looked at twice, provided the disfigured side of her face was turned away.

She was tired. The moonlight had grown too bright and too cold. She went back to her bedroom, turned off the light, threw the rose-colored gown across a chair and got into bed. Here the moonlight was reduced. It gave a sense of warmth where it stretched across the rose-colored gown. A lethargy settled over her, and she felt herself sinking into a great emptiness.

She awoke shaking, drenched with a strange, sweet terror. There was light still in the room, but of a faintly opalescent tinge that merged with shadows, so that everything was indistinct. Some sickly thought about a waning moon entered her mind, but a line of Turgenev washed it away, "*In the garden the nightingale was singing his last song before the dawn.*" Listen. . . . Yes, a bird was singing, but not a nightingale. Dawn had emerged, wan and weak, from the womb of night.

Would she ever dare to sleep again? For in her sleep she had been ravished, in all the various meanings of that word.

All her ifs had been bowled over like tenpins by a bowl from the hand of a crack player. The dead had risen. The young man had descended from the frame. Like a strip-teaser, she had tossed off the years one by one until she lay clothed only in the soft flesh of a few years past twenty. He had looked at her and had found her desirable.

She could feel a flush spread over the whole surface of her body. For a moment or two she lay relaxed with memory; but another fit of shivering seized her. She roused to a sense that the room was icy.

I'm sick. Let's face it. I'm a sick woman. It's the solitude. I've never been alone like this before. But truth interrupted to say that there had always been a sense of somebody close at hand. Closer in every way than the caretaker and his wife—too close, maybe. And though once she would have smiled at the implication of that, she now shivered again and sighed.

Resolutely she got up. She would make some toast and coffee and get to work again. She would work without stint until she could conscientiously say that she had earned money already received and then she would resign.

Braced by the coffee, she started for the gallery; but on impulse, wrapped in the cloak that the morning chill made necessary, she decided to take a stroll on the terrace, which would probably be warmer than the house.

The rising sun told that the day would be warm—one of those days when a haze hung over the river, one of those days when she loved to sit and dream, or feel, because it was a feeling of reality into which she slipped, shaking off a world of which she had no part.

Resolutely she squared her shoulders and went in. But when she came to her desk in the gallery, she decided that it was not yet light enough to work. She might as well go up to the tower until the day was full-born.

The tower was shadowy. But day breaking over the river would be all the more impressive with a twilight gloom at her back. And then she felt the blood chill. She reached a chair by the table, sat down and lowered her head to her knees, trying at the same time to raise her eyes sufficiently to keep the window in view.

If he made one move toward her, she would scream; and once started, she believed she never would stop. When the faintness had passed and slowly she straightened, there was nobody in the room. She thought the daylight advanced with unusual rapidity. Light streamed through the window, giving it a borrowed effect of stained glass. Though she could see that the window seat was unoccupied, she had but to close her eyes to see him clearly again. A gnomelike man with a slit lip, with face seamed and pitted, with nose awry, with eyes that— Gradually she saw only the eyes and, seeing them, felt that she had seen all the sorrows of the world. Compassion streamed over her, agonizing regret that, by the look of horror, fear and abhorrence, she had added her bit to his weight of sorrow. Her own misfortune, her cheek stained with an ugly birthmark, told her something of what it must be like to be condemned to go through life like that, to know that women turned away in revulsion, that children probably hid from him in fright, that even men . . .

The caretaker must have seen him. How else could he have got in? But when she spoke to him about it, he said no, of course not. No one had entered, unless he came through the French door she had left unlocked.

"Unless he slipped through the keyhole!" she said with nerve-racked asperity. "How could he have got through the door without my seeing him, and up to the tower ahead of me?"

But when he asked, with a skeptical look, what sort of man he was, she found herself tongue-tied. She could not bear to say, "The most repulsive-looking man in the world." When he said something about the tower's being dim at so early an hour, she agreed and turned away.

By noon she was wondering if she really had seen anyone. If not, she was definitely ill—not only because she was having hallucinations but because her mind could create such a fearful one. At that thought she felt the eyes reproach her and was torn with longing to assuage the wound.

She kept away from the tower all day, though desire to go there, to recapture the old trancelike rapture, rasped her nerves like the craving for dope.

As she surveyed the work she had done, she saw that through some intense driving power she had accomplished in half a day what would ordinarily have taken a day and a half. Her love of the work took possession of her again. She stretched back in her chair and closed her eyes, conscious for the first time that she was tired. She could see, could feel the river flowing by.

Bits of imagery from half-forgotten poems drifted through her mind; bits that conveyed only feebly the sense of the marvelous transformation that took shape as she looked out, letting her gaze project itself farther and farther toward infinity. She jerked out of an uncomfortable sleep; coming back to reality with the fretfulness of a child.

It was the caretaker's wife, with an embarrassed and worried look upon her face. "Do you mind if I speak a bit that's in my mind, Miss Reed?"

"Of course not. What's worrying you?"

"You, if you don't mind my saying so. I'll wager you weigh fifteen pounds less than the day you came. You haven't seen a human being to speak to except Sam and me. It's not good to stick to work as you do."

Mrs. Brown was worried about her—about anything more than her thinness? Had she been doing queer things?

"If I were you I'd change over to the inn for the nights. Lord, nothing would tempt me to sleep up here all by myself. I'd have bats in my belfry if I so much as tried it."

She took a deep breath. Fresh air seemed to flow over her. She had not faced the thought of night because she lacked the courage, but knew that when the time comes, a person can usually face what can't be avoided. But to be free of nights here while reveling in the days!

"I like the idea of the inn. I'll admit that the bedroom is somewhat damp and chilly." There, she had got by that nicely. Both of them relaxed. "Do you suppose I can get a room at such short notice?"

"At this time of the year, yes. Shall I telephone?"

"If you will be so kind."

She awoke from a night of dreamless sleep, with a sense of buoyancy that made her smile at thought of sickness. Thin, yes. Maybe if she had both breakfast and dinner at

the inn she'd plump up a bit. Even though she had no desire to make acquaintances, yet eating in the company of others might give food a more savory taste.

Again she settled down to work, punishing her mind with mental arithmetic, which it hated, whenever it teased for just one look from the tower, just one glimpse of paradise. *Not until five o'clock*, she said firmly.

It was in the middle of the afternoon that she came across the gray notebook, in a large book on the bottom shelf—a dingy book with an unprepossessing title. Its leaves had been hollowed out. There were thin-papered letters under the notebook. She glanced at them first. Her instinctive disquiet at reading what the first line revealed to be love letters eased as she proceeded. They were so lyrical, so intense, so impassioned, they became at once associated with the loves that have become public property.

Her dream came vividly back to her and, putting a hand over the birthmark, she let the same sweet terror it had produced sweep over her again. But the letters puzzled her. Though clearly both sides of a correspondence, all were in the same handwriting—a script in which each letter was as perfect as if typewritten, and so small that, without that perfection, it would have been almost undecipherable.

The notebook was in the same handwriting; and that was so small and at times so cryptographic, through abbreviations, that reading it was as if one with a smattering of a foreign language were trying to translate it. It seemed to be a random jotting down of notes. She saw a familiar sentence, "He who has seen paradise with earth-bound eyes." That verified the book as Thomas Woods's—probably the notes from which he had put his book together.

But a few pages beyond she came upon, "Heaven but the vision of fulfilled desires. Heaven but the vision of fulfilled desires." Over and over the phrase was repeated down the length of two pages, the final phrase sputtering out in a spatter of blots, as if the writer had reached the end of endurance.

A magnifying glass was needed for the fine writing. Instead of going up to the tower when her day's work was over, she would drive into town and buy a glass.

The glass showed that the book was a repository for flashing thoughts, a writer's net to catch each stirring fancy. She found other bits from *Ultima Thule*. She came across a description of her—of their—paradise that made her tremble. She recognized it even from the first line, "Across the river. . . ." His imagery produced that same sense of shallow breathing that a long stay in the tower produced—the same sense of expectancy of being about to take off from the earth.

A few pages beyond, she came across the first personal record, "I have engaged Vernon to paint my portrait."

Sol! It was his portrait. The caretaker had lied. But why?

I haven't quite decided what I want, except that everything about it must reflect strength, vitality, wholeness—like the god which man has created in his own image and which the inhuman mover of the universe must regard with sardonic glee.

What did he mean? A portrait without warts or blemishes? Evidently he had found a compliant painter. She had no scorn for such vanity when she remembered that if necessity called for her photograph, she turned the good side of her face toward the camera.

She could not bear to put the book down even when finished. It had enmeshed her in the same spell that the tower had cast upon her—even more, for with the book she had looked upon the land of fulfilled desires in company with one who had not merely looked, but had entered into a kingdom that stretched to whatever point of ravishing beauty the imagination could conceive. And his imagination had seemed to approach the infinite.

She was glad, a few days later, that will power had continued to prevail and keep her at work. Sticking to long hours, and with an almost superhuman energy, she had made up for considerable of her previous sloth when the executor of the estate appeared. But he had come, she learned, only to fulfill the obligation that a quarterly visit should be made to see that all the necessary things were being done for preservation of the place.

"What is to be done with it eventually?" she asked.

"Nothing."

"Nothing!"

"Nothing beyond keeping it in repairs and seeing that there are competent caretakers. He established a trust fund for that and to cover the taxes. Everything is to be kept exactly as he left it—except the library. The proceeds from the sale of that are to be added to the fund."

A swiftly born desire was expressed aloud, "I wonder—if there's no great urge for hurry—could I change the contract? Could we settle upon a price for the complete job and let me take my time doing it?"

"But wouldn't that mean prolonging your stay here?"

"Would that matter? To anyone but the caretakers? I don't think Mrs. Brown would mind. I am getting two meals at the inn and have only sandwiches for lunch, which I can get myself."

"That's all right. But aren't you dreadfully lonely here? I should think you would be glad to get away from it."

"I love it. There's no place where I'd rather be."

"Mr. Woods once said something like that—and added, 'Now and hereafter.' He occasionally said fanciful things like that, though he had a wonderfully acute mind."

"Did Mr. Woods spend much of his life here?"

"Most of it. All of the last half of his life."

"And his family?"

"He had none. His mother died when he was born, and his father a good many years ago. He was the only child."

"Didn't he ever marry?"

"Good grief! No!"

He stared at her with the same sort of astonishment that the caretaker had shown when she asked about the portrait. She asked about it again. "That's a portrait of him when young, isn't it?"

His mouth fell open. It seemed a long time before he spoke again. "Do you mean to say that you didn't know about him?"

"Why should I?" She sounded snappish. "I never heard of him until I was engaged to catalogue the library. What was there about him that I should have heard?"

"He was—well, frankly, in olden days he would have been thought a monster." He lowered his voice as if it were a subject not to be broached aloud. "He was frightful to look upon."

"With a slit lip?"

"Why, yes. I thought you said—"

"Did he look like a little old gnome?"

"No. Well—er, yes, I suppose you might say he did in the final years. All of his hair came out, and he wasted away. But in his younger days his shoulders were massive—which made it all the worse in a way."

"In what way?"

"By way of emphasizing his deformity. His legs—they stopped at the knees. His feet were where his kneecaps should have been."

With a blanched face she almost shouted, "How can God do such cruel inhuman things?"

"I know. I always felt that way when I saw him." He turned toward the portrait. "He nearly drove the artist wild about that. I don't know just what he had in mind."

"But I do. He commissioned the making of a shell appropriate for his personality." The phrases came back to her, *Nobody will recognize it as me, but nobody ever sees the real me.* "What a hell on earth!" she said, choking on the words.

"It was, of course. And he had seventy-two years of it. And yet, although I never could bear to look directly at him—he had beautiful eyes, by the way, if you could forget the rest for a minute—yes, though I was uncomfortable in his presence, when I was out of it I felt a pygmy. Partly because I knew his mind was much better than mine. But also because his words carried over in memory; and he had the most moving voice I've ever heard. Well, stay on and do the work as you like. It might be some recompense to him if he could know that someone had the same feeling about the place that he had."

She did not stir until the sound of a moving car faded into nothingness. Then, breathless with eagerness, she climbed the four flights of steps to the tower. It made no difference who shared it with her—the youth of the por-

trait or the gnome of her hallucination. She even liked to think that the latter was beside her, that the sorrows of the world ceased to be reflected in his eyes as they led the way, while hers followed, to the land of fulfilled desires.

About the author:

(I pass this on, as I got it, after reading the story—JM)

Elizabeth Emmett was born in Rhode Island, in a Victorian home newly built by her English immigrant father. She came into a world made brilliant by the fall colors of New England's flowering: 1883 was a year after Emerson and Longfellow died; nine years before Whitman and Whittier would follow; the heyday of William James, and the last decade of Oliver Wendell Holmes. Among the treasures of her past, Miss Emmett appears to value equally her mother's Mayflower descent and her father's English edition, three-volume, illustrated Shakespeare which, she says, "I still enjoy reading from more than any other copies."

Miss Emmett submitted her first story to a magazine at the age of thirteen. Fifteen years later in 1911, she made her first sale, "for \$35. Twenty-five, really, because the agent took ten as a minimum fee..." Since then, she has written and sold magazine verse, light articles, humor, history, a few short stories, and novels ("The Land He Loved," "Secret in a Snuffbox").

"Having always been deaf—or 'hard of hearing'—" she writes with characteristic distaste for inaccuracy (in the name of euphemism or anything else), "I learned that whatever happiness I had must come from myself, books, garden, etc..." Modern medical technology makes the statement seem quaint; modern mores would likely supply "less a-social" refugees than books and garden.

The eventual hearing aid came (unfortunately?) "too late to get me into any part of social life, but there's plenty at home to keep me both busy and interested. I do all the work, inside and out..." including mowing the lawn "with considerable cussing," chasing rabbits and woodchucks out of the garden which is "now going back to the wild state... I walk to the library and post office about twice a week, though old legs are beginning to rebel. And I loved walking as much as Thoreau did. Once in a great while I go on some short trip with a friend or relative. It was a trip to the 'castle' built by the actor William Gillette, in Connecticut, that started 'Enchantment'..."

THIOTIMOLINE AND THE SPACE AGE

by Isaac Asimov

from *Analog Science Fact & Fiction*

This remarkable report does not actually concern a major breakthrough of the past year. The original publication of the discovery of Thiotimoline is, after all, fourteen years old now. But I feel that s-f readers have almost a vested interest in the progress of time research—as indeed also in the Good Doctor himself—and that the selection was especially appropriate here between Miss Emmett's strangely convincing traffic with the past, and Marshall King's story of young Purnie's time-play.

(Transcript of a speech delivered at the 12th annual meeting of the American Chronochemical Society.)

Gentlemen:

I have been called the founder of chronochemistry and in response I cannot resist a certain sense of pride. To have originated a new science is a privilege given to very few.

I can still remember, quite clearly, that day in 1947 when I first dropped a pinch of thiotimoline into water and thought I noticed something odd. To be sure, it dissolved rapidly; but I was used to that. It always seemed to vanish the instant it touched the water.

But I had never handled a sample of thiotimoline quite as pure as the pinch I had obtained that July day and, as I watched the white powder drop toward the water, I distinctly remember myself thinking, "Why, that dissolved *before* it hit the water."

Well, it's an old story to you, I know, though I still like to linger on the thrill of the slow awakening of certainty; of the measurements taken; of the first crude timings by eye; of the more delicate work of the original endochronometer—the same instrument now at the Smithsonian.

The announcement of endochronicity, of the fact that a substance existed which dissolved in water 1.12 seconds *before* the water was added created a stir. You all remember it, I'm sure. And yet, somehow, the impression arose that thiotimoline was a hoax. There was a distinct air of amusement in many of the comments in the learned journals. Private communications reaching me showed a distressing tendency to describe experiments which obviously lacked all scientific validity and which, I could but conclude, were meant as some sort of joke. Perhaps the final proof of the damage this has done is that after twelve years of existence, the American Chronochemical Society can muster an audience of exactly fifteen people to hear this talk.

It has been an expensive* joke, gentlemen, one that has cost us our lead in the race for space. For while American researchers have, but with difficulty, obtained grants to continue their investigations of thiotimoline and have been starved into small-scale experiments, while withering under the genial air of disbelief on the part of their colleagues, the Soviet Union has established the town Khrushchevsk in the Urals, whose popular nickname of "Tiotimolingrad" will well describe the nature of the activities that go on behind the walls of the modern and well-equipped scientific laboratories that have been established there.

That the Soviet Union has taken thiotimoline seriously and has done something about it is as sure as can be, and yet we remain sunk in complacency. No important political figure has viewed the matter with alarm. If they have said anything at all for publication, it is simply, "What's thiotimoline?" I intend now to explain to these near-sighted politicians just what thiotimoline means to our space effort.

Thiotimoline research graduated from what we might now call the "classical" stage, to the "modern" with the development of the "telechronic battery" by Anne McLaren and Donald Michie of the University of Edinburgh. If you have read about it anywhere, you can only be clairvoyant, for the popular press and much of the learned press maintained a stubborn silence. In fact, the original paper appeared only in the small though highly respected, *Journal of*

Irreproducible Results, edited by that able gentleman Alexander Kohn. Let me describe the telechronic battery.

A simple endochronometer—with which we are all acquainted—is a device which will automatically deliver water into a small tube containing thiotimoline. The thiotimoline will dissolve 1.12 seconds before the water is delivered.

Imagine the endochronometer so connected with a second similar unit that the solution of the thiotimoline in the first activates the water-delivering pipette of the second. The thiotimoline of the second unit will dissolve 1.12 seconds before that water is delivered, and therefore 2.24 seconds before the water is delivered to the first unit.

An indefinite number of endochronometers can thus be hooked up, the thiotimoline of each of the series dissolving 1.12 seconds before the preceding member. A battery consisting of about 77,000 such units would yield a final sample of thiotimoline which dissolved a full day before the initial quantity of water was delivered.

Such batteries have now been developed both at Edinburgh and in my own laboratories in Boston in extremely compact models, through use of printed circuits and advanced miniaturization. A device of not more than a cubic foot in volume can afford a twenty-four hour endochronic interval. There is strong, if indirect, evidence that the Soviet Union possesses even more sophisticated devices and is turning them out in commercial quantities.

The obvious practical application of the telechronic battery is that of weather prediction. In other words, if the first element of a battery is exposed to the air in such a way that rain, if any, will fall upon it, the final element will dissolve the day before and thus offer a foolproof method of predicting rain—or lack of rain—one day ahead.

I trust you will all see, gentlemen, that the telechronic battery can be used for generalized predictions as well.

Suppose, to take a frivolous example, you were interested in a particular horse race. Suppose you intended to place a wager that a particular horse would win that race. Twenty-four hours in advance of the race, you could make up your mind quite firmly that if the horse were to win the next day, you would, immediately upon receiving the news, add

water to the first element of a telechronic battery. If it did not win, you would not.

Having made that decision, you need then but observe the last element. If the thiotimoline in that last element dissolves—followed by a chain of solutions all along the battery at 1.12 second intervals, with which you need not be concerned—you will know that the horse will win beyond doubt. You might even, if you were in a flamboyant mood, allow the solution of the final element to activate a flashing light, a fire gong, a charge of explosive; anything that will unmistakably attract your attention.

You laugh, gentlemen, and yet can this system not be applied, without change, to the launching of a satellite?

Suppose that four hours after launching, an automatic device on board the satellite telemeters a signal to the launching base. Suppose, next, that this radio signal is designed to activate the first element of a telechronic battery.

Do you see the consequences? The sending of the signal four hours after launching can only mean that the satellite is safely in orbit. If it were not, it would have plunged to destruction before the four hours had elapsed. If then, the final element of the telechronic battery dissolves today, we can be certain that there will be a successful launching tomorrow and all may proceed.

If the final element does not dissolve, the launching will not be successful and there must, therefore, be something wrong with the satellite assembly. A team of technicians will begin checking the device and at the moment when the defective item is corrected, the telechronic battery will operate. The launching will then be scheduled in the full expectation of success.

Do you still laugh, gentlemen?

Is this not the only feasible explanation for the consistent Soviet successes as compared with our own very spotty record? It is customary, of course, to attribute the appearance of unfailing success of Soviet launchings to the fact that they have been deliberately hiding many failures, but does this stand up? Have they not, with remarkable consistency, managed to score successes at such time as would most profit themselves?

Sputnik I went up within a month of the hundredth birthday of Tsiolkovsky, the soviet rocket pioneer. Sputnik II went up to celebrate the fortieth anniversary of the Russian Revolution. Lunik II went up just before Khrushchev's visit to the United States. Lunik III went up on the second anniversary of Sputnik I.

Coincidence? Or did they simply have the foreknowledge of their telechronic batteries? Have they tested a number of possible rocket assemblies and selected that one for which success was forecast? How else can one explain that the United States has not yet succeeded in launching any of their many rockets on some significant day?

Nor, remember, do the Soviets invariably hold their announcements back until they are certain they have achieved success, as some have suggested. In at least one case, they announced an achievement in advance.

When Lunik III was on its way to circle the Moon, the Soviet scientists confidently announced it would take pictures of the hidden side of the Moon as it progressed round that body in its orbit. As far as the orbit of Lunik III was concerned, they were safe. From its motion and from the positions of Earth, Moon and Lunik, the orbit of Lunik III could be calculated with absolute precision.

How could the Soviet scientists, however, be so sure that the intricacies of the camera assemblage would work to perfection? Could it be that the successful completion of the camera-task was set to activate a telechronic battery at the launching base? Could its activation have allowed them to make their announcement a day before the pictures were taken with the full knowledge that success and a prestige-victory would result?

I say the answer is: Obviously, yes.

And what of future attempts to send a man into space? Suppose the man were to agree to send a signal, manually, after a certain time had elapsed after firing. A telechronic battery would then tell us, while the astronaut was still on the ground and unlaunched that not only would he be in orbit but that he would be alive and at least well enough to send the message.

If the telechronic battery remains inactive, the man will

not be sent up. It is as simple as that. Since it is the chance of harm to an astronaut that is the deciding factor holding back the step of "man into space," it seems certain that the Soviet Union will achieve this goal first, thanks to our government's obtuseness with respect to thiotimoline.

Presumably, one can extend the principle to all manner of scientific and nonscientific investigations. Gigantic megabatteries can even be built—in theory—to predict the result of an election to be held the following year—but I have labored the point long enough. Let me, instead, make a few remarks concerning the great dangers as well as the great benefits, which are involved in thiotimoline research.

These begin with the oldest of all paradoxes of thiotimoline—the paradox of fooling. In other words, the chance of having thiotimoline dissolve and then being fooled by a refusal to add the water. The original argument against such a notion, as elucidated in my laboratory, involved the theory of the endochronic atom—which has since been confirmed by half a dozen other investigators. One pair of the bonds of one or more of the carbon atoms in the thiotimoline molecule are forced, through supersteric hindrance, to a point in the temporal plane. One bond extends 1.12 seconds into the past and one extends 1.12 seconds into the future. When the future end of a thiotimoline molecule dissolves and drags the rest of the molecule with it, it is therefore not predicting a possible future event. It is recording an actual future event.

Nevertheless, it has been shown that fooling thiotimoline is possible in theory. Using Heisenberg's principle of uncertainty, it can be demonstrated that one cannot say with certainty that an individual molecule of thiotimoline will dissolve before the water is added and that, in fact, the probability of its not doing so is quite appreciable.

That is undoubtedly true—for an individual molecule. When, however, quintillions of molecules are involved as is the case with even the most microscopic samples of thiotimoline actually used in the individual units of even the most sophisticated telechronic batteries, the chance that all

of those quintillions, or even a detectable fraction of them, will fail to dissolve is infinitesimal.

To be sure, in setting up a telechronic battery, in which many thousands of units are involved, the failure of the instrument will depend on the failure to dissolve of any one of those units. The chance of "Heisenberg failure," as it is called, can be calculated and some estimates at least seem to show that a battery will give a false positive one time out of rather more than a million.

In such a case, the final unit in a telechronic battery will dissolve even though water is not added to the first. Somewhat more often, the converse will be true; that the final unit will not dissolve in advance even though water is added to the first. Naturally the former alternative is more interesting from the theoretical viewpoint, the question arising: Then where did the water come from?

An attempt was made in my laboratories to actually record such a false negative involving solution without subsequent addition of water. The possibility of creation of matter out of nothing existed and this would be of great importance in connection with the Gold-Hoyle theory of the steady-state universe.

The principle involved in the attempt was simple. One of my students would set up a battery adjusted for the manual addition of water the next day, intending in all honesty to allow the experiment to take its course. The final unit would, theoretically, dissolve. I would then place the first student at a different task and put a second student in charge of the battery with instructions not to add water.

Our first great surprise was to find that the final unit actually dissolved, under these circumstances, about once in twenty efforts. This was a far greater incidence than could possibly be explained by "Heisenberg failure." But, as it rapidly turned out, the thiotimoline was not "fooled." Something, in every case, brought about the addition of water. In the first case, the original student returned to add the water and did so before he could be stopped. In another case, there was accidental spillage. In another, a janitor—

But it would be tedious to describe the manner in which

thiotimeline, so to speak, refused to be fooled. Suffice it that we did not have one true case of "Heisenberg failure."

With time, of course, we began to guard against ordinary accidents and the incidence of "pseudofailure" declined. For instance, we placed the battery in closed, desiccated vessels; but, during pseudofailure, these cracked and broke.

In our final experiment we thought that surely we had a "Heisenberg failure" but in the end, the experiment was not reported in the literature. I tried instead, and without success, to report the implications of it to appropriate officials. Let me describe the experiment to you now.

We placed the battery in a welded steel container after it had registered solution.

And as we waited for the moment when the water should be added but would not, Hurricane Diane struck New England. That was in August of 1955. The hurricane had been predicted, its course had been followed and we were ready for it. There had been several hurricanes in New England in '54 and '55 and we were hardened to it.

At one point, though, the Weather Bureau announced the danger to be passed, the hurricane was blowing out to sea. We all sighed with relief as we waited for zero minute.

However, if any of you were in New England that day you will remember that the Weather Bureau announced later that it had "lost" the hurricane; that the backlash struck surprisingly; that five inches of rain or more fell in many places within an hour; that rivers rose and extensive flooding began.

I watched that rain; it was a deluge. I watched the small river running across our campus become a torrent and begin to spread up and out across the lawns while the lines of shrubbery seemed to grow out of roiled sheets of water.

I shouted for an axe. One of my students brought one, remarking afterward that I sounded so wild he was almost afraid I had turned homicidal maniac.

I smashed that steel container. I removed the telechronic battery and in the flickering gray light of that storm-lashed day, I filled a beaker of water and waited for zero minute, ready to douse the battery at the proper moment.

As I did so, the rain slackened, the hurricane moved off.

I do not say we caused the hurricane to return and yet—water had to be added to that battery somehow. If the stainless steel container had to be floated away on a rising flood and smashed by wind and water to have that done, it would be done. The original solution of the final unit predicted that; or else it predicted my deliberate subversion of the experiment. I chose the latter.

As a result of all this, I can envisage what I can only call a "peace bomb." Enemy agents working within a particular nation, can assemble telechronic batteries, operate them until a case occurs in which the final unit dissolves. That battery can then be encased in a steel capsule and placed near a stream well above high-water mark. Twenty-four hours later, a disastrous flood is bound to occur, since only so can water reach the container. This will be accompanied by high winds since only so can the container be smashed.

Damage will undoubtedly be as great in its way as would result from an H-Bomb blast and yet the telechronic battery would be a "peace bomb" for its use will not bring on retaliation and war. There would be no reason to suspect anything but an act of God.

Such a bomb requires little in the way of technology or expense. The smallest nation, the smallest of revolutionary or dissident groups could manage it.

Sometimes in my more morbid moment, I wonder if perhaps Noah's flood—the prototype of which actually has been recorded in Mesopotamian sediments—was not brought about by thiotimoline experiments among the ancient Sumerians.

I tell you, gentlemen, if we have one urgent task ahead of us now it is to convince our government—to press for international control of all sources of thiotimoline. It is boundlessly useful when used properly; boundlessly harmful when used improperly.

Not a milligram of it must be allowed to reach irresponsible hands.

Gentlemen, I call you to a crusade for the safety of the world!

BEACH SCENE

by Marshall King

from *Galaxy*

On all the frontiers, new and old, physical and speculative, the perils, and hardships of exploration (be it danger of death, deprivation, excommunication, or no more than academic hilarity) attract two very different kinds of men: those driven by curiosity and those drawn to conquest—the seekers of light and the searchers for might. Often the conflict between them is even sharper than the endless quarrel between the frontiersmen (of all kinds) and those less restless souls who hold up the established foundations from which the explorers go forth.

This story is Mr. King's first published fiction.

Purnie ran laughing and shouting through the forest until he could run no more. He fell headlong into a patch of blue moss and whooped with delight in having this day free for exploring. He was free to see the ocean at last.

When he had caught his breath, he looked back through the forest. No sign of the village; he had left it far behind. Safe from the scrutiny of brothers and parents, there was nothing now to stop him from going to the ocean. This was the moment to stop time.

"On your mark!" he shouted to the rippling stream and its orange whirlpools. He glanced furtively from side to side, pretending that some object might try to get a head start. "Get set!" he challenged the thin-winged bees that hovered over the abundant foliage. "Stop!" He shrieked this command upward toward the dense, low-hanging purple clouds that perennially raced across the treetops, making one wonder how tall the trees really were.

His eyes took quick inventory. It was exactly as he knew it would be: the milky-orange stream had become motionless and its minute whirlpools had stopped whirling; a

nearby bee hung suspended over a paka plant, its transparent wings frozen in position for a downward stroke; and the heavy purple fluid overhead held fast in its manufacture of whorls and nimbi.

With everything around him in a state of perfect tableau, Purnie hurried toward the ocean.

If only the days weren't so short! he thought. There was so much to see and so little time. It seemed that everyone except him had seen the wonders of the beach country. The stories he had heard from his brothers and their friends had taunted him for as long as he could remember. So many times had he heard these thrilling tales that now, as he ran along, he could clearly picture the wonderland as though he were already there. There would be a rockslide of petrified logs to play on, the ocean itself with waves higher than a house, the comical three-legged tripons who never stopped munching on seaweed, and many kinds of other wonderful creatures found only at the ocean.

He bounced through the forest as though the world was reserved this day just for him. And who could say it wasn't? he thought. Wasn't this his fifth birthday? He ran along feeling sorry for four-year-olds, and even for those who were only four and a half, for they were babies and wouldn't dare try slipping away to the ocean alone. But five!

"I'll set you free, Mr. Bee—just wait and see!" As he passed one of the many motionless pollen-gathering insects he met on the way, he took care not to brush against it or disturb its interrupted task. When Purnie had stopped time, the bees—like all the other creatures he met—had been arrested in their native activities, and he knew that as soon as he resumed time, everything would pick up where it had left off.

When he smelled an acid sweetness that told him the ocean was not far off, his pulse quickened in anticipation. Rather than spoil what was clearly going to be a perfect day, he chose to ignore the fact that he had been forbidden to use time-stopping as a convenience for journeying far from home. He chose to ignore the oft-repeated statement that an hour of time-stopping consumed more energy than a week of foot-racing. He chose to ignore the negative

maxim that "small children who stop time without an adult being present, may not live to regret it."

He chose, instead, to picture the beaming praise of family and friends when they learned of his brave journey.

The journey was long, the clock stood still. He stopped long enough to gather some fruit that grew along the path. It would serve as his lunch during this day of promise. With it under his arm he bounded along a dozen more steps, then stopped abruptly in his tracks.

He found himself atop a rocky knoll, overlooking the mighty sea!

He was so overpowered by the vista before him that his "Hurrah!" came out as a weak squeak. The ocean lay at the ready, its stilled waves awaiting his command to resume their tidal sweep. The breakers along the shoreline hung in varying stages of disarray, some having already exploded into towering white spray while others were poised in smooth orange curls waiting to start that action.

And there were new friends everywhere! Overhead, a flock of spora were frozen in a steep glide, preparatory to a beach landing. Purnie had heard of these playful creatures many times. Today, with his brothers in school, he would have the pets all to himself. Further down the beach was a pair of two-legged animals poised in mid-step, facing the spot where Purnie now stood. Some distance behind them were eight more, each of whom were motionless in a curious pose of interrupted animation. And down in the water, where the ocean ran itself into thin nothingness upon the sand, he saw standing here and there the comical tripons, those three-legged marine buffoons who made handsome careers of munching seaweed.

"Hi there!" Purnie called. When he got no reaction, he remembered that he himself was "dead" to the living world: he was still in a zone of time-stopping, on the inside looking out. For him, the world would continue to be a tableau of mannikins until he resumed time.

"Hi there!" he called again; but now his mental attitude was that he expected time to resume. It did! Immediately he was surrounded by activity. He heard the roar of the crashing orange breakers, he tasted the dew of acid that

floated from the spray, and he saw his new friends continue the actions which he had stopped while back in the forest.

He knew, too, that at this moment, in the forest, the little brook picked up its flow where it had left off, the purple clouds resumed their leeward journey up the valley, and the bees continued their pollen-gathering without having missed a single stroke of their delicate wings. The brook, the clouds, and the insects had not been interrupted in the least; their respective tasks had been performed with continuing sureness. It was time itself that Purnie had stopped, not the world around him.

He scampered around the rockpile and down the sandy cliff to meet the tripons who, to him, had just come to life.

"I can stand on my head!" He set down his lunch and balanced himself bottoms-up while his legs pawed the air in an effort to hold him in position. He knew it was probably the worst head-stand he had ever done, for he felt weak and dizzy. Already time-stopping had left its mark on his strength. But his spirits ran on unchecked.

The tripon thought Purnie's feat was superb. It stopped munching long enough to give him a salutary wag of its rump before returning to its repast.

Purnie ran from pillar to post, trying to see and do everything at once. He looked around to greet the flock of spora, but they had glided to a spot further along the shore. Then, bouncing up to the first of the two-legged animals, he started to burst forth with his habitual "Hi there!" when he heard them making sounds of their own.

"... will be no limit to my operations now, Benson. This planet makes seventeen. Seventeen planets I can claim as my own!"

"My, my. Seventeen planets. And tell me, Forbes, just what the hell are you going to do with them—mount them on the wall of your den back in San Diego?"

"Hi there, wanna play?" Purnie's invitation got nothing more than a startled glance from the animals who quickly returned to their chatter. He scampered up the beach, picked up his lunch, and ran back to them, tagging along at their heels. "I've got my lunch, want some?"

"Benson, you'd better tell your men back there to stop gawking at the scenery and get to work. Time is money. I didn't pay for this expedition just to give your flunkies a vacation."

The animals stopped so suddenly that Purnie nearly tangled himself in their heels.

"All right, Forbes, just hold it a minute. Listen to me. Sure, it's your money that put us here; it's your expedition all the way. But you hired me to get you here with the best crew on earth, and that's just what I've done. My job isn't over yet. I'm responsible for the safety of the men while we're here, and for the safe trip home."

"Precisely. And since you're responsible, get 'em working. Tell 'em to bring along the flag. Look at the damn fools back there, playing in the ocean with a three-legged ostrich!"

"Good God, man, aren't you human? We've only been on this planet twenty minutes! Naturally they want to look around. They half expected to find wild animals or worse, and here we are surrounded by quaint little creatures that run up to us like we're long-lost brothers. Let the men look around a minute or two before we stake out your claim."

"Bah! Bunch of damn children."

As Purnie followed along, a leg shot out at him and missed. "Benson, will you get this bug-eyed kangaroo away from me!" Purnie shrieked with joy at this new frolic and promptly stood on his head. In this position he got an upside-down view of them walking away.

He gave up trying to stay with them. Why did they move so fast, anyway? What was the hurry? As he sat down and began eating his lunch, three more of the creatures came along making excited noises, apparently trying to catch up to the first two. As they passed him, he held out his lunch. "Want some?" No response.

Playing held more promise than eating. He left his lunch half eaten and went down to where they had stopped further along the beach.

"Captain Benson, sir! Miles has detected strong radiation in the vicinity. He's trying to locate it now."

"There you are, Forbes. Your new piece of real estate

is going to make you so rich that you can *buy* your next planet. That'll make eighteen, I believe."

"Radiation, bahl! We've found low-grade ore on every planet I've discovered so far, and this one'll be no different. Now how about that flag? Let's get it up, Benson. And the cornerstone, and the plaque."

"All right, lads. The sooner we get Mr. Forbes's pennant raised and his claim staked out, the sooner we can take time to look around. Lively now!"

When the three animals went back to join the rest of their group, the first two resumed walking. Purnie followed along.

"Well, Benson, you won't have to look far for materials to use for the base of the flag pole. Look at that rockpile up there."

"Can't use them. They're petrified logs. The ones on top are too high to carry down, and if we move those on the bottom, the whole works will slide down on top of us."

"Well—that's your problem. Just remember. I want this flag pole to be solid. It's got to stand at least—"

"Don't worry, Forbes, we'll get your monument erected. What's this with the flag? There must be more to staking a claim than just putting up a flag."

"There is, there is. Much more. I've taken care of all requirements set down by law to make my claim. But the flag? Well, you might say it represents an empire, Benson. The Forbes Empire. On each of my flags is the word FORBES, a symbol of development and progress. Call it sentiment if you will."

"Don't worry, I won't. I've seen real-estate flags before."

"Damn it all, will you stop referring to this as a real-estate deal? What I'm doing is big, man. Big! This is pioneering."

"Of course. And if I'm not mistaken, you've set up a neat little escrow system so that you not only own the planets, but you will virtually own the people who are foolish enough to buy land on them."

"I could have your hide for talking to me like this. Damn you, man! It's people like me who give your space ships some place to go. It's people like me who pour good money into a chancy job like this, so that people like you

can get away from thirteen-story tenement houses. Did you ever think of that?"

"I imagine you'll triple your money in six months."

When they stopped, Purnie stopped. At first he had been interested in the strange sounds they were making, but as he grew used to them, and as they in turn ignored his presence, he hopped alongside chattering to himself, content to be in their company.

He heard more of these sounds coming from behind, and he turned to see the remainder of the group running toward them. "Captain Benson! Here's the flag, sir. And here's Miles with the scintillometer. He says the radiation's getting stronger over this way!"

"How about that, Miles?"

"This thing's going wild, Captain. It's almost off scale."

Purnie saw one of the animals hovering around him with a little box. Thankful for the attention, he stood on his head. "Can you do this?" He was overjoyed at the reaction. They all started making wonderful noises, and he felt most satisfied.

"Stand back, Captain! Here's the source right here! This little chuckwalla's hotter than a plutonium pile!"

"Let me see that, Miles. Well, I'll be damned! Now what do you suppose—"

By now they had formed a widening circle around him, and he was hard put to think of an encore. He gambled on trying a brand-new trick: he stood on one leg.

"Benson, I must have that animal! Put him in a box."

"Now wait a minute, Forbes. Universal Law forbids—"

"This is my planet and I am the law. Put him in a box!"

"With my crew as witness, I officially protest—"

"Good God, what a specimen to take back. Radioactive animals! Why, they can reproduce themselves, of course! There must be thousands of these creatures around here some place. And to think of those damn fools on Earth with their plutonium piles! Hah! Now I'll have investors *flocking* to me. How about it, Benson—does pioneering pay off or doesn't it?"

"Not so fast. Since this little fellow is radioactive, there may be great danger to the crew—"

"Now look here! You had planned to put *mineral* specimens in a lead box, so what's the difference? Put him in a box."

"He'll die."

"I have you under contract, Benson! You are responsible to me, and what's more, you are on my property. Put him in a box."

Purnie was tired. First the time-stopping, then this. While this day had brought more fun and excitement than he could have hoped for, the strain was beginning to tell. He lay in the center of the circle happily exhausted, hoping that his friends would show him some of their own tricks.

He didn't have to wait long. The animals forming the circle stepped back and made way for two others who came through carrying a box. Purnie sat up to watch the show.

"Hell, Captain, why don't I just pick him up? Looks like he has no intention of running away."

"Better not, Cabot. Even though you're shielded, no telling what powers the little fella has. Play it safe and use the rope."

"I swear he knows what we're saying. Look at those eyes."

"All right, careful now with that line."

"Come on, baby. Here you go. That's a boy!"

Purnie took in these sounds with perplexed concern. He sensed the imploring quality of the creature with the rope, but he didn't know what he was supposed to do. He cocked his head to one side as he wiggled in anticipation.

He saw the noose spinning down toward his head, and, before he knew it, he had scooted out of the circle and up the sandy beach. He was surprised at himself for running away. Why had he done it? He wondered. Never before had he felt this fleeting twinge that made him want to protect himself.

He watched the animals huddle around the box on the beach, their attention apparently diverted to something else. He wished now that he had not run away; he felt he had lost his chance to join in their fun.

"Wait!" He ran over to his half-eaten lunch, picked it

up, and ran back into the little crowd. "I've got my lunch, want some?"

The party came to life once more. His friends ran this way and that, and at last Purnie knew that the idea was to get him into the box. He picked up the spirit of the tease, and deliberately ran within a few feet of the lead box, then, just as the nearest pursuer was about to push him in, he sidestepped onto safer ground. Then he heard a deafening roar and felt a warm, wet sting in one of his legs.

"Forbes, you fool! Put away that gun!"

"There you are, boys. It's all in knowing how. Just winged him, that's all. Now pick him up."

The pang in his leg was nothing: Purnie's misery lay in his confusion. What had he done wrong? When he saw the noose spinning toward him again, he involuntarily stopped time. He knew better than to use this power carelessly, but his action now was reflex. In that split second following the sharp sting in his leg, his mind had grasped in all directions to find an acceptable course of action. Finding none, it had ordered the stoppage of time.

The scene around him became a tableau once more. The noose hung motionless over his head while the rest of the rope snaked its way in transverse waves back to one of the two-legged animals. Purnie dragged himself through the congregation, whimpering from his inability to understand.

As he worked his way past one creature after another, he tried at first to not look them in the eye, for he felt sure he had done something wrong. Then he thought that by sneaking a glance at them as he passed, he might see a sign pointing to their purpose. He limped by one who had in his hand a small shiny object that had been emitting smoke from one end; the smoke now billowed in lifeless curls about the animal's head. He hobbled by another who held a small box that had previously made a hissing sound whenever Purnie was near. These things told him nothing. Before starting his climb up the knoll, he passed a tripon which, true to its reputation, was comical even in fright. Startled by the loud explosion, it had jumped four feet into the air before Purnie had stopped time. Now it hung there,

its beak stuffed with seaweed and its three legs drawn up into a squatting position.

Leaving the assorted statues behind, he limped his way up the knoll, torn between leaving and staying. What an odd place, this ocean country! He wondered why he had not heard more detail about the beach animals.

Reaching the top of the bluff, he looked down upon his silent friends with a feeling of deep sorrow. How he wished he were down there playing with them. But he knew at last that theirs was a game he didn't fit into. Now there was nothing left but to resume time and start the long walk home. Even though the short day was nearly over, he knew he didn't dare use time-stopping to get himself home in nothing flat. His fatigued body and clouded mind were strong signals that he had already abused this faculty.

When Purnie started time again, the animal with the noose stood in open-mouthed disbelief as the rope fell harmlessly to the sand—on the spot where Purnie had been standing.

"My God, he's—he's gone."

Then another of the animals, the one with the smoking thing in his hand, ran a few steps toward the noose, stopped and gaped at the rope. "All right, you people, what's going on here? Get him in that box. What did you do with him?"

The resumption of time meant nothing at all to those on the beach, for to them time had never stopped. The only thing they could be sure of was that at one moment there had been a fuzzy creature hopping around in front of them, and the next moment he was gone.

"Is he invisible, Captain? Where is he?"

"Up there, Captain! On those rocks. Isn't that him?"

"Well, I'll be damned!"

"Benson, I'm holding you personally responsible for this! Now that you've botched it up, I'll bring him down my own way."

"Just a minute, Forbes, let me think. There's something about that fuzzy little devil that we should... Forbes! I warned you about that gun!"

Purnie moved across the top of the rockpile for a last look at his friends. His weight on the end of the first log started the slide. Slowly at first, the giant pencils began cascading down the short distance to the sand. Purnie fell back onto solid ground, horrified at the spectacle before him. The agonizing screams of the animals below filled him with hysteria.

The boulders caught most of them as they stood ankle-deep in the surf. Others were pinned down on the sand.

"I didn't mean it!" Purnie screamed. "I'm sorry! Can't you hear?" He hopped back and forth near the edge of the rise, torn with panic and shame. "Get up! Please get up!" He was horrified by the moans reaching his ears from the beach. "You're getting all wet! Did you hear me? Please get up." He was choked with rage and sorrow. How could he have done this? He wanted his friends to get up and shake themselves off, tell him it was all right. But it was beyond his power to bring it about.

The lapping tide threatened to cover those in the orange surf.

Purnie worked his way down the hill, imploring them to save themselves. The sounds they made carried a new tone, a desperate foreboding of death.

"Rhodes! Cabot! Can you hear me?"

"I—I can't move, Captain. My leg, it's... My God, we're going to drown!"

"Look around you, Cabot. Can you see anyone moving?"

"The men on the beach are nearly buried, Captain. And the rest of us here in the water—"

"Forbes. Can you see Forbes? Maybe he's—" His sounds were cut off by a wavelet gently rolling over his head.

Purnie could wait no longer. The tides were all but covering one of the animals, and soon the others would be in the same plight. Disregarding the consequences, he ordered time to stop.

Wading down into the surf, he worked a log off one victim, then he tugged the animal up to the sand. Through blinding tears, Purnie worked slowly and carefully. He knew there was no hurry—at least, not as far as his friends' safety was concerned. No matter what their condition of

life or death was at this moment, it would stay the same way until he started time again. He made his way deeper into the orange liquid, where a raised hand signaled the location of a submerged body. The hand was clutching a large white banner that was tangled among the logs. Purnie worked the animal free and pulled it ashore.

It was the one who had been carrying the shiny object that spit smoke.

Scarcely noticing his own injured leg, he ferried one victim after another until there were no more in the surf. Up on the beach, he started unraveling the logs that pinned down the animals caught there. He removed a log from the lap of one, who then remained in a sitting position, his face contorted into a frozen mask of agony and shock. Another, with the weight removed, rolled over like an iron statue into a new position. Purnie whimpered in black misery as he surveyed the chaotic scene before him.

At last he could do no more; he felt consciousness slipping away from him.

He instinctively knew that if he lost his senses during a period of time-stopping, events would pick up where they had left off . . . without him. For Purnie, this would be death. If he had to lose consciousness, he knew he must first resume time.

Step by step he plodded up the little hill, pausing every now and then to consider if this were the moment to start time before it was too late. With his energy fast draining away, he reached the top of the knoll, and he turned to look down once more on the group below.

Then he knew how much his mind and body had suffered: when he ordered time to resume, nothing happened.

His heart sank. He wasn't afraid of death, and he knew that if he died the oceans would roll again. And his friends would move about. But he wanted to see them safe.

He tried to clear his mind for supreme effort. There was no *urging* time to start. He knew he couldn't persuade it by bits and pieces, first slowly then full ahead. Time either progressed or it didn't. He had to take one viewpoint or the other. Then, without knowing exactly when it happened, his mind took command. . . .

His friends came to life. The first one he saw stir lay on his stomach and pounded his fists on the beach. A flood of relief settled over Purnie as sounds came from the animal.

"What's the matter with me? Somebody tell me! Am I nuts? Miles! Schick! What's happening?"

"I'm coming, Rhodes! Heaven help us, man—I saw it, too. We're either crazy or those damn logs are alive!"

"It's not the logs. How about us? How'd we get out of the water? Miles, we're both cracking."

"I'm telling you, man, it's the logs, or rocks or whatever they are. I was looking right at them. First they're on top of me, then they're piled up over there!"

"Damn it, the logs didn't pick us up out of the ocean, did they? Captain Benson!"

"Are you men all right?"

"Yes, sir, but—"

"Who saw exactly what happened?"

"I'm afraid we're not seeing right, Captain. Those logs—"

"I know, I know. Now get hold of yourselves. We've got to round up the others and get out of here while time is on our side."

"But what happened, Captain?"

"Hell, Rhodes, don't you think I'd like to know? Those logs are so old they're petrified. The whole bunch of us couldn't lift one. It would take superhuman energy to move one of those things."

"I haven't seen anything superhuman. Those ostriches down there are so busy eating seaweed—"

"All right, let's bear a hand here with the others. Some of them can't walk. Where's Forbes?"

"He's sitting down there in the water, Captain, crying like a baby. Or laughing. I can't tell which."

"We'll have to get him. Miles, Schick, come along, Forbes! You all right?"

"Ho-ho-ho! Seventeen! Seventeen! Seventeen planets, Benson, and they'll do anything I say! This one's got a mind of its own. Did you see that little trick with the rocks? Ho-ho!"

"See if you can find his gun, Schick; he'll either kill him-

self or one of us. Tie his hands and take him back to the ship. We'll be along shortly."

"Hah-hah-hah! Seventeen! Benson, I'm holding you personally responsible for this. Hee-heel!"

Purnie opened his eyes as consciousness returned. Had his friends gone?

He pulled himself along on his stomach to a position between two rocks, where he could see without being seen. By the light of the twin moons he saw that they were leaving, marching away in groups of two and three, the weak helping the weaker. As they disappeared around the curving shoreline, the voices of the last two, bringing up the rear far behind the others, fell faintly on his ears over the sound of the surf.

"Is it possible that we're all crazy, Captain?"

"It's possible, but we're not."

"I wish I could be sure."

"See Forbes up ahead there? What do you think of him?"

"He'll never be the same. He really cracked, didn't he?"

"Right. And if you'd lost your mind, you'd never be aware of Forbes's condition; you'd be just like he is. He thinks the world is out of step; you think you're out of step. You're O.K., Cabot, buck up."

"I still can't believe it."

"Tell me something. What was the most unusual thing you noticed back there?"

"You must be kidding, sir. Why, the way those logs were off of us suddenly—"

"Yes, of course. But I mean beside that."

"Well, I guess I was kind of busy. You know, scared and mixed up."

"But didn't you notice our little pop-eyed friend?"

"Oh, him. I'm afraid not, Captain. I—I guess I was thinking mostly of myself."

"Hmmm. If I could only be sure I saw him. If only someone else saw him too."

"I'm afraid I don't follow you, sir."

"Well, damn it all, you know that Forbes took a pot shot at him. Got him in the leg. That being the case, why

would the fuzzy little devil come back to his tormentors—back to us—when we were trapped under those logs?”

“Well, I guess as long as we were trapped, he figured we couldn’t do him any more harm. . . . I’m sorry, that was a stupid answer. I guess I’m still a little shaky.”

“Forget it. Look, you go ahead to the ship and make ready for takeoff. I’ll join you in a few minutes. I think I’ll go back and look around. You know. Make sure we haven’t left anyone.”

“No need to do that. They’re all ahead of us. I’ve checked.”

“That’s my responsibility, Cabot, not yours. Now go on.”

As Purnie lay gathering strength for the long trek home, he saw through glazed eyes one of the animals coming back along the beach. When it was nearly directly below him, he could hear it making sounds that by now had become familiar.

“Where are you?”

Purnie paid little attention to the antics of his friend; he was beyond understanding. He wondered what they would say at home when he returned.

“We’ve made a terrible mistake. We—” The sounds faded in and out on Purnie’s ears as the creature turned slowly and called in different directions. He watched the animal walk over to the pile of scattered logs and peer around and under them.

“If you’re hurt I’d like to help!” The twin moons were high in the sky now, and where their light broke through the swirling clouds a double shadow was cast around the animal. With foggy awareness, Purnie watched the creature shake its head slowly, then walk away in the direction of the others.

Purnie’s eyes stared, without seeing, at the panorama before him. The beach was deserted now, and his gaze was transfixed on a shimmering white square floating on the ocean. Across it, the last thing Purnie ever saw, was emblazoned the word FORBES.

CREATURE OF THE SNOWS

by William Sambrot

from *The Saturday Evening Post*

The Ugly Earthman has had small chance as yet to assert his antagonisms aspace. But all along familiar planetary frontiers, explorers (of both breeds: questers and conquestadors) daily attack the boundaries of the unknown.

Last year, one of the oldest of old mysteries, the Abominable Snowman, was back in the public prints, under examination on two very different fronts.

Fellow name of Tschernozky in London (a reputable zoologist at Queen Mary College), made a plaster cast from photographs of footprints ascribed to A. Snowman; compared the cast's prints with those of similarly made prints of the several animals the A. S. is supposed to be; announced (according to *Newsweek*) that the photo prints had not been made by bear, langur, or mountain gorilla, but by a "very huge, heavily built, two-footed primate...."

Meantime Edmund (Everest) Hillary went back to the mountains to check the whole matter out; came back and published a series of loudly debunking articles, exposing all evidence offered to him as either fraudulent or honest error. (Whether he saw Tschernozky's plaster casts, I do not know.)

In any case, the public prints were full of A. S., and so was ripe for it; this was the year for Other Creature stories.

Ed McKale straightened up under his load of cameras and equipment, squinting against the blasting wind, peering, staring, sweeping the jagged, unending expanse of snow and wind-scoured rock. Looking, searching, as he'd been doing now for two months, cameras at the ready.

Nothing. Nothing but the towering Himalayas, thrusting miles high on all sides, stretching in awesome grandeur from horizon to horizon, each pinnacle tipped with im-

mense banners of snow plumes, streaming out in the wind, vivid against the darkly blue sky. The vista was one of surpassing beauty; viewing it, Ed automatically thought of light settings, focal length, color filters—then just as automatically rejected the thought. He was here, on top of the world, to photograph something infinitely more newsworthy—if only he could find it.

The expedition paused, strung out along a ridge of blue snow, with shadows falling away to the right and left into terrifying abysses, and Ed sucked for air. Twenty thousand feet is really quite high, although many of the peaks beyond rose nearly ten thousand feet above him.

Up ahead, the Sherpa porters—each a marvelous shot, gap-toothed, ebullient grins, seamed faces, leathery brown—bowed under stupendous loads for this altitude, leaning on their coolie crutches, waiting for Doctor Schenk to make up his mind. Schenk, the expedition leader, was arguing with the guides again, his breath spurting little puffs of vapor, waving his arms, pointing—down.

Obviously Schenk was calling it quits. He was within his rights, Ed knew; two months was all Schenk had contracted for. Two months of probing snow and ice; scrambling over crevasses, up rotten rock cliffs, wind-ravaged, bleak, stretching endlessly toward Tibet and the never-never lands beyond. Two months of searching for footprints where none should be. Searching for odors, for droppings, anything to disclose the presence of creatures other than themselves. Without success.

Two months of nothing. Big, fat nothing.

The expedition was a bust. The goofiest assignment of this or any other century, as Ed felt it would be from the moment he'd sat across a desk from the big boss in the picture-magazine's New York office, two months ago, looking at the blurred photograph, while the boss filled him in on the weird details:

The photograph, his boss had told him gravely, had been taken in the Himalayan mountains, at an altitude of twenty-one thousand feet, by a man soaring overhead in a motorless glider.

"A glider," Ed had said noncommittally, staring at the

fuzzy enlarged snapshot of a great expanse of snow and rocky ledges, full of harsh light and shadows, a sort of roughly bowl-shaped plateau apparently, and in the middle of it a group of indistinct figures, tiny, lost against the immensity of great ice pinnacles. Ed looked closer. Were the figures people? If so—what had happened to their clothes?

"A glider," his boss reiterated firmly. The glider pilot, the boss said, was maneuvering in an updraft, attempting to do the incredible—soar over Mount Everest in a home-made glider. The wide-winged glider had been unable to achieve the flight over Everest, but, flitting silently about seeking updrafts, it cleared a jagged pinnacle and there, less than a thousand feet below, the pilot saw movement where none should have been. And dropping lower, startled, he'd seen, the boss said dryly, "creatures—creatures that looked exactly like a group of naked men and women and kids, playing in the snow, at an altitude of twenty thousand five hundred feet." He'd had the presence of mind to take a few hasty snapshots before the group disappeared. Only one of the pictures had developed.

Looking at the snapshot with professional scorn, Ed had said, "These things are indistinct. I think he's selling you a bill of goods."

"No," the boss said, "we checked on the guy. He really did make the glider flight. We've had experts go over that blowup. The picture's genuine. Those are naked biped, erect-walking creatures." He flipped the picture irritably. "I can't publish this thing; I want close-ups, action shots, the sort of thing our subscribers have come to expect of us."

He'd lighted a cigar slowly. "Bring me back some pictures I can publish, Ed, and you can write your own ticket."

"You're asking me to climb Mount Everest," Ed said, carefully keeping the sarcasm out of his voice. "To search for this plateau here," he tapped the shoddy photograph, "and take pix of—what are they, biped, erect-walking creatures, you say?"

The boss cleared his throat. "Not Mount Everest, Ed. It's Gauri Sankar, one of the peaks near Mount Everest.

Roughly, it's only about twenty-three thousand feet or so high."

"That's pretty rough," Ed said.

The boss looked pained. "Actually it's not Gauri Sankar either. Just one of the lesser peaks of the Gauri Sankar massif. Well under twenty-three thousand. Certainly nothing to bother a hot-shot exparatrooper like you, Ed."

Ed winced, and the boss continued, "This guy—this glider pilot—wasn't able to pin-point the spot, but he did come up with a pretty fair map of the terrain—for a pretty fair price. We've checked it out with the American Alpine Club; it conforms well with their own charts of the general area. Several expeditions have been in the vicinity, but not this exact spot, they tell me. It's not a piece of cake by any means, but it's far from being another Annapurna, or K-Two, for accessibility."

He sucked at his cigar thoughtfully. "The Alpine Club says we've got only about two months of good weather before the inevitable monsoons hit that area—so time, as they say, is of the essence, Ed. But two months for this kind of thing ought to be plenty. Everything will be first class; we're even including these new gas guns that shoot hypodermic needles, or something similar. We'll fly the essentials into Katmandu and air-drop everything possible along the route up to your base at"—he squinted at a map—"Namche Bazar. A Sherpa village which is twelve thousand feet high."

He smiled amiably at Ed. "That's a couple of weeks' march up from the nearest railroad, and ought to get you acclimatized nicely. Plenty of experienced porters at Namche, all Sherpas. We've lined up a couple of expert mountain climbers with Himalayan background. And expedition leader will be Doctor Schenk—top man in his field."

"What is his field?" Ed asked gloomily.

"Zoology. Whatever these things are in this picture, they're animal, which is his field. Everyone will be sworn to secrecy; you'll be the only one permitted to use a camera, Ed. This could be the biggest thing you'll ever cover, if these things are what I think they are."

"What do you think they are?"

"An unknown species of man—or sub-man," his boss said, and prudently Ed remained silent. Two months would tell the tale.

But two months didn't tell. Oh, there were plenty of wild rumors by the Nepalese all along the upper route. Hushed stories of the two-legged creature that walked like a man. A monster the Sherpas called Yeti. Legends. Strange encounters; drums sounding from snow-swept heights; wild snatches of song drifting down from peaks that were inaccessible to ordinary men. And one concrete fact: a ban, laid on by the Buddhist monks, against the taking of any life in the high Himalayas. What life? Ed wondered.

Stories, legends—but nothing else.

Two months of it. Starting from the tropical flatlands, up through the lush, exotic rain forest, where sun struggled through immense trees festooned with orchids. Two months, moving up into the arid foothills, where foliage abruptly ceased and the rocks and wind took over. Up and ever up, to where the first heavy snow pack lay. And higher still, following the trail laid out by the glider pilot—and what impelled a man, Ed wondered, to soar over Mount Everest in a homemade glider?

Two months, during which Ed had come to dislike Doctor Schenk intensely. Tall, saturnine, smelling strongly of formaldehyde, Schenk classified everything into terms of vertebrate, invertebrate.

So now, standing on this wind-scoured ridge with the shadows falling into the abysses on either side, Ed peered through ice-encrusted goggles, watching Schenk arguing with the guides. He motioned to the ledge above, and obediently the Sherpas moved toward it. Obviously that would be the final camping spot. The two months were over by several days; Schenk was within his rights to call it quits. It was only Ed's assurances that the plateau they were seeking lay just ahead that had kept Schenk from bowing out exactly on the appointed time; that and the burning desire to secure his niche in zoology forever with a new specimen: biped, erect-walking—what?

But the plateau just ahead, and the one after that, and all the rest beyond had proved just as empty as those behind.

A bust. Whatever the unknown creatures were the glider pilot had photographed, they would remain just that—unknown.

And yet, as Ed slogged slowly up toward where the porters were setting up the bright blue-and-yellow nylon tents, he was nagged by a feeling that that odd-shaped pinnacle ahead looked awfully much like the one in the blurred photograph. With his unfailing memory for pictures, Ed remembered the tall, jagged cone that had cast a black shadow across a snowy plateau, pointing directly toward the little group that was in the center of the picture.

But Schenk wasn't having any more plateaus. He shook his head vehemently, white-daubed lips a grim line on his sun-blistered face. "Last camp, Ed," he said firmly. "We agreed this would be the final plateau. I'm already a week behind schedule. If the monsoons hit us, we could be in serious trouble below. We have to get started back. I know exactly how you feel, but—I'm afraid this is it."

Later that night, while the wind moved ceaselessly, sucking at the tent, they burrowed in sleeping bags, talking.

"There must be some basis of fact in those stories," Ed said to Doctor Schenk. "I've given them a lot of thought. Has it occurred to you that every one of the sightings, the few face-to-face meetings of the natives and these—these unknowns, has generally been just around dawn, and usually when the native was alone?"

Schenk smiled dubiously. "Whatever this creature may be—and I'm convinced that it's either a species of large bear, or one of the great anthropoids—it certainly must keep off the well-traveled routes. There are very few passes through these peaks, of course, and it would be quite simple for them to avoid these locales."

"But we're not on any known trail," Ed said thoughtfully. "I believe our methods have been all wrong—stringing out a bunch of men, looking for trails in the snow. All we've done is announce our presence to anything with

ears for miles around. That glider pilot made no sound; he came on them without warning."

Ed looked intently at Schenk. "I'd like to try that peak up ahead—and the plateau beyond." When Schenk uttered a protesting cry, Ed said, "Wait; this time I'll go alone—with just one Sherpa guide. We could leave several hours before daybreak. No equipment, other than oxygen, food for one meal—and my cameras, of course. Maintain a strict silence. We could be back before noon. Will you wait long enough for this one last try?" Schenk hesitated. "Only a few hours more," Ed urged.

Schenk stared at him, then he nodded slowly. "Agreed. But aren't you forgetting the most important item of all?" When Ed looked blank, Schenk smiled. "The gas gun. If you should run across one, we'll need more proof than just your word for it."

There was very little wind, no moon, but cold, the cold approaching that of outer space, as Ed and one Sherpa porter started away from the sleeping camp, up the shattered floor of an ice river that swept down from the jagged peak ahead.

They moved up, hearing only the squeak of equipment, the peculiar gritty sound of crampons biting into packed snow, an occasional hollow crash of falling ice blocks. To the east already a faint line of gray was visible; daylight was hours away, but at this tremendous height sunrise came early. They moved slowly, the thin air cutting cruelly into their lungs, moving up, up.

They stopped once for hot chocolate from a vacuum bottle, and Ed slapped the Sherpa's shoulder, grinning, pointing ahead to where the jagged peak glowed pink and gold in the first slanting rays of the sun. The Sherpa looked at the peak and quickly shifted his glance to the sky. He gave a long, careful look at the gathering clouds in the east, then muttered something, shaking his head, pointing back, back down to where the camp was hidden in the inky shadows of enormous boulders.

When Ed resumed the climb, the Sherpa removed the long nylon line which had joined them. The route was now comparatively level, on a huge sweeping expanse of snow-

covered glacier that flowed about at the base of the peak. The Sherpa, no longer in the lead, began dropping behind as Ed pressed eagerly forward.

The sun was up, and with it the wind began keening again, bitterly sharp, bringing with it a scent of coming snow. In the east, beyond the jagged peak just ahead, the immense escarpment of the Himalayas was lost in approaching cloud. Ed hurried as best he could; it would snow, and soon. He'd have to make better time.

But above, the sky was blue, infinitely blue, and behind, the sun was well up, although the camp was still lost in night below. The peak thrust up ahead, near, with what appeared to be a natural pass skirting its flank. Ed made for it. As he circled an upthrust ridge of reddish, rotten rock, he glanced ahead. The plateau spread out before him, gently sloping, a natural amphitheater full of deep, smooth snow, with peaks surrounding it, and the central peak thrusting a long black shadow directly across the center. He paused, glancing back. The Sherpa had stopped, well below him, his face a dark blur, looking up, gesticulating frantically, pointing to the clouds. Ed motioned, then moved around, leaning against the rock, peering ahead.

That great shadow against the snow was certainly similar to the one in the photo—only, of course, the shadow pointed west now, when, later, it would point northwest, as the sun swung to the south. And when it did, most certainly it was the precise— He sucked in a sharp, lung-piercing breath.

He stared, squinting against the rising wind that seemed to blow from earth's outermost reaches. Three figures stirred slightly, and suddenly leaped into focus, almost perfectly camouflaged against the snow and wind-blasted rock. Three figures, not more than a hundred feet below him. Two small, one larger.

He leaned forward, his heart thudding terribly at this twenty-thousand-foot height. A tremor of excitement shook him. My Lord—it was true. They existed. He was looking at what was undeniably a female and two smaller—what? Apes?

They were covered with downy hair, nearly white, resembling nothing so much as tight-fitting leotards. The female was exactly like any woman on earth—except for the hair. No larger than most women, with arms slightly longer, more muscular. Thighs heavier, legs out of proportion to the trunk—shorter. Breasts full and firm. Not apes.

Hardly breathing, Ed squinted, staring, motionless. Not apes. Not standing so erectly. Not with those broad, high brows. Not with the undeniable intelligence of the two young capering about their mother. Not—and seeing this, Ed trembled against the freezing rock—not with the sudden affectionate sweep of the female as she lifted the smaller and pressed it to her breast, smoothing back hair from its face with a motion common to every human mother on earth. A wonderfully tender gesture.

What were they? Less than human? Perhaps. He couldn't be certain, but he thought he heard a faint gurgle of laughter from the female, fondling the small one, and the sound stirred him strangely. Doctor Schenk had assured him that no animal was capable of genuine laughter; only man.

But they laughed, those three, and, hearing it, watching the mother tickling the younger one, watching its delighted squirming, Ed knew that in that marvelous little grouping below, perfectly lighted, perfectly staged, he was privileged to observe one of the earth's most guarded secrets.

He should get started, shooting his pictures; afterward he should stun the group into unconsciousness with the gas gun and then send the Sherpa back down for Doctor Schenk and the others. Clouds were massing, immensities of blue-black. Already the first few flakes of snow, huge and wet, drifted against his face.

But for a long moment more he remained motionless, oddly unwilling to do anything to destroy the harmony, the aching purity of the scene below, so vividly etched in brilliant light and shadow. The female, child slung casually on one hip, stood erect, hand shading her eyes, and Ed grinned. Artless, but perfectly posed. She was looking carefully about and above, scanning the great outcroppings of rock, obviously searching for something.

Then she paused. She was staring directly at him.

Ed froze, even though he knew he was perfectly concealed by the deep shadows of the high cliff behind him. She was still looking directly at him, and then, slowly her hand came up. She waved.

He shivered uncontrollably in the biting wind, trying to remain motionless. The two young ones suddenly began to jump up and down and show every evidence of joy. And suddenly Ed knew.

He turned slowly, very slowly, and with the sensation of a freezing knife plunging deeply into his chest, he saw the male less than five yards away.

It was huge, easily twice the size of the female below. And, crazily, Ed thought of Schenk's little lecture, given what seemed like eons ago, in the incredible tropical grove far below, and six weeks before, where rhododendrons grew in wild profusion and enormous butterflies flitted about: "In primitive man," Schenk had said, "as in the great apes today, the male was far larger than the female."

The gas gun was hopelessly out of reach, securely strapped to his shoulder pack. Ed stared, knowing there was absolutely nothing he could do to protect himself before this creature, fully eight feet tall, with arms as big as Ed's own thighs, and eyes (*My Lord—blue eyes!*) boring into his. There was a light of savage intelligence there—and something else.

The creature made no move against him, and Ed stared at it, breathing rapidly, shallowly and with difficulty, noting with his photographer's eyes the immense chest span, the easy rise and fall of his breathing, the large, square, white teeth, the somber cast of his face. There was long, sandy fur on the shoulders, chest and back, shortening to off-white over the rest of the magnificent torso. Ears rather small and close to the head. Short, thick neck, rising up from the broad shoulders to the back of the head in a straight line. Toes long and definitely prehensile.

They looked intently at each other across the abyss of time and mystery. Man and—what? How long, Ed wondered, had it stood there, observing him? Why hadn't it attacked? Had it been waiting for Ed to make a single threatening gesture—such as pointing a gun or camera?

Seeing the calm awareness in those long, slanting, blue eyes, Ed sped a silent prayer of thanks upward; most certainly if he had made a move for camera or gun, that move would have been his last.

They looked at each other through the falling snow, and suddenly there was a perfect instantaneous understanding between them. Ed made an awkward, half-frozen little bow, moving backward. The great creature stood motionless, merely watching, and then Ed did a strange thing: He held out his hands, palms up, gave a wry grin—and ducked quickly around the outcropping of rock and began a plunging, sliding return down the way he'd come. In spite of the harsh, snow-laden wind, bitterly cold, he was perspiring.

Ed glanced back once. Nothing. Only the thickening veil of swift-blowing snow, blanking out the pinnacle, erasing every trace—every proof that anyone, anything, had stood there moments before. Only the snow, only the rocks, only the unending wind-filled silence of the top of the world. Nothing else.

The Sherpa was struggling up to him from below, terribly anxious to get started back; the storm was rising. Without a word they hooked up and began the groping, stumbling descent back to the last camp. They found the camp already broken, Sherpas already moving out. Schenk paused only long enough to give Ed a questioning look.

What could Ed say? Schenk was a scientist, demanding material proof: If not a corpse, at the very least a photograph. The only photographs Ed had were etched in his mind—not on film. And even if he could persuade Schenk to wait, when the storm cleared, the giant, forewarned, would be gone. Some farther peak, some remoter plateau would echo to his young ones' laughter.

Feeling not a bit bad about it, Ed gave Schenk a barely perceptible negative nod. Instantly Schenk shrugged, turned and went plunging down, into the thickening snow, back into the world of littler men. Ed trailed behind.

On the arduous trek back, through that first great storm, through the snow line, through the rain forest, hot and humid, Ed thought of the giant, back up there where the air was thin and pure.

Who, what was he, and his race? Castaways on this planet, forever marooned, yearning for a distant, never-to-be-reached home?

Or did they date in unbroken descent from the Pleistocene—man's first beginning—when all the races of not-quite-man were giants; unable, or unwilling, to take the fork in the road that led to smaller, cleverer man, forced to retreat higher and higher, to more remote areas, until finally there was only one corner of earth left to them—the high Himalayas?

Or were he and his kind earth's last reserves: not-yet-men, waiting for the opening of still another chapter in earth's unending mystery story?

Whatever the giant was, his secret was safe with him, Ed thought. For who would believe it—even if he chose to tell?

ABOMINABLE

by Fredric Brown

from *The Dude*

Fred Brown, once best known—outside of s-f—for his award-winning mysteries, has of recent years become an irrepressible miniaturizer, publishing trios of fantasy-humor vignettes in one magazine after another. (A snapcrackling sampling of the Brown quickies is in his recent collection, "Nightmares and Geezenstacks," Bantam, 1961.) Here he foreshortens a situation only slightly different from Mr. Sam-brot's.

Right up to the end, that is. . . .

Sir Chauncey Atherton waved a farewell to the Sherpa guides who were to set up camp here and let him proceed alone. This was the point beyond which they would not accompany him. This was Abominable Snowman country, a few hundred miles north of Mt. Everest, in the Himalayas. Abominable Snowmen were seen occasionally on Everest, on other Tibetan or Nepalese mountains, but Mt. Oblimov, at the foot of which he was now leaving his native guides, was so thick with them that not even the Sherpas would climb it, but would here await his return, if any. It took a brave man to pass this point. Sir Chauncey was a brave man.

Also, he was a connoisseur of women, which was why he was here and about to attempt, alone, not only a dangerous ascent but an even more dangerous rescue. If Lola Gabraldi was still alive, an Abominable Snowman had her.

Sir Chauncey had never seen Lola Gabraldi, in the flesh. He had, in fact, learned of her existence less than a month ago, when he had seen the one motion picture in which she had starred—and through which she had become suddenly fabulous, the most beautiful woman on Earth, the most pul-

chritudinous movie star Italy had ever produced, and Sir Chauncey could not understand how even Italy had produced her. In one picture she had replaced Bardot, Lollobrigida and Ekberg as the image of feminine perfection in the minds of connoisseurs anywhere. The moment he had seen her on the screen he had known that he must know her in the flesh, or die trying.

But by that time Lola Gabraldi had vanished. As a vacation after her first picture she had taken a trip to India and had joined a group of climbers about to make an assault on Mt. Oblimov. The others of the party had returned; she had not. One of them had testified that he had seen her, at a distance too great for him to reach her in time, abducted, carried off screaming by a nine-foot-high hairy more-or-less-manlike creature. An Abominable Snowman. The party had searched for her for days before giving up and returning to civilization. Everyone agreed that there was no possible chance, now, of finding her alive.

Everyone except Sir Chauncey, who had immediately flown from England to India.

He struggled on, now high into the eternal snows. And in addition to mountain climbing equipment he carried the heavy rifle with which he had, only last year, shot tigers in Bengal. If it could kill tigers, he reasoned, it could kill Snowmen.

Snow swirled about him as he neared the cloud line. Suddenly, a dozen yards ahead of him, which was as far as he could see, he caught a glimpse of a monstrous not-quite-human figure. He raised his rifle and fired. The figure fell, and kept on falling; it had been on a ledge over thousands of feet of nothingness.

And at the moment of the shot, arms closed around Sir Chauncey from behind him. Thick, hairy arms. And then, as one hand held him easily, the other took the rifle and bent it into an L-shape as effortlessly as though it had been a toothpick and then tossed it away.

A voice spoke from a point about two feet above his head. "Be quiet; you will not be harmed." Sir Chauncey was a brave man, but a sort of squeak was all the answer he could make, despite the seeming assurance of the words.

He was held so tightly against the creature behind him that he could not look upward and backward to see what its face was like.

"Let me explain," said the voice above and behind him. "We, whom you call Abominable Snowmen, are human, but transmuted. A great many centuries ago we were a tribe like the Sherpas. We chanced to discover a drug that let us change physically, let us adapt by increased size, hairiness and other physiological changes to extreme cold and altitude, let us move up into the mountains, into country in which others cannot survive, except for the duration of brief climbing expeditions. Do you understand?"

"Y-y-yes," Sir Chauncey managed to say. He was beginning to feel a faint return of hope. Why would this creature be explaining these things to him if it intended to kill him?

"Then I shall explain further. Our number is small and is diminishing. For that reason we occasionally capture, as I have captured you, a mountain climber. We give him the transmuting drug; he undergoes the physiological changes and becomes one of us. By that means we keep our number, such as it is, relatively constant."

"B-but," Sir Chauncey stammered, "is that what happened to the woman I'm looking for, Lola Gabraldi? She is now—eight feet tall and hairy and—"

"She *was*. You just killed her. One of our tribe had taken her as its mate. We will take no revenge for your having killed her, but you must now, as it were, take her place."

"Take her place? But—I'm a *man*."

"Thank God for that," said the voice above and behind him. He found himself turned around, held against a huge hairy body, his face at the right level to be buried between mountainous hairy breasts. "Thank God for that—because I am an Abominable Snowwoman."

Sir Chauncey fainted and was picked up and, as lightly as though he were a toy dog, carried away by his mate.

THE MAN ON TOP

by R. Bretnor

from *Esquire*

This story, originally published by *Esquire* in 1951, was reprinted last year in *Fantasy and Science Fiction*—thereby barely justifying my inclusion of it here, to complete my Himalayan set of three.

Who was the first man to reach the top of Nanda Urvat? Any school kid can tell you—*toughest mountain in the world. 26,318 feet, conquered finally by Geoffrey Barbank.*

I was forgotten. I was just the fellow who went along. The press gave Barbank the credit. He was the Man on Top, the Man on the Top of the World.

Only he wasn't, really. He knows that it's a lie. And that hurts.

A mountain, you know, is a quest, a mystery, a challenge to the spirit. Mallory, who died on Everest, knew that. But Barbank climbed Nanda Urvat simply to keep some other man from being first. Mysteries did not exist for him, and anyone who felt the sense of mystery was a fool. All men were fools to Barbank—or enemies.

I found that out the day I joined the expedition in Darjeeling. "The town's in a sweat about some flea-bag Holy Man," he told me after lunch. "Let's go and look the old fraud over. Might have a bit of fun."

So the two of us walked down from the hotel, and, all the way, he boasted of his plans. I can still see his face, big, cold, rectangular, as he discussed the men who'd tried and failed. Of course they'd muffed it. You couldn't climb Nanda Urvat on the cheap. He'd do things differently. All his equipment was better than the best that the many others had had. Because he had designed it. Because it had cost a mint.

It made me angry. But I had come too far to be turned back. I let him talk.

We turned into the compound of a temple. There was a quiet crowd there, squatting in the dust, and many monkeys. By a stone wall, under a huge umbrella, the Holy Man was seated on a woven mat. His long, white hair framed the strangest face I've ever seen—moon-round, unlined, perfectly symmetrical. His eyes were closed. Against the pale brown skin, his full lips curved upward like the horns of a Turkish bow. It was a statue's face, smiling a statue's smile, utterly serene.

The people seemed waiting for something. As we came through the crowd, no one spoke. But Barbank paid no heed. We halted up in front; and he talked on.

"What's more," he was saying, "I don't intend to bother with filthy Sherpa porters for the upper camps. Planes will drop the stuff."

That set me off. "The Sherpas are brave men," I told him, "and good mountaineers."

"Rot," he snapped. "They're beasts of burden." He pointed at the Holy Man. "There's a sample for you. Look at that smirk. Pleased as punch with his own hocus-pocus—dirt, his nakedness, and all. They've made no progress since the Year One."

The Holy Man was naked, or nearly so, but he was clean; his loincloth was spotless white. "Perhaps," I answered, "they're trying for something else."

And slowly, then, the Holy Man looked up. He spoke to Barbank. "We are," he said.

I met his eyes—and suddenly the statue came alive. It was as though I had seen only the shell of his serenity; now I saw its source. I felt that it was born, not in any rejection of the world, but in a knowledge of every human agony and joy.

"Yes, we are trying," the Holy Man went on. His voice was beautiful and strangely accented, and there was humor in it, and irony. "But for something else? I do not think so. It is just that we are trying differently, we of the East and West—and sometimes one cannot succeed without the

other." Pausing, he measured Barbank with those eyes. "That is why I can help you, if you will only ask."

Barbank's mouth curled. "He's heard the gossip down in the bazaar," he said to me. "Well, he won't get a penny out of me."

The smile danced. "Must I explain? A mountain is much more than rock and ice. No man can conquer the hardest mountain in the world. His conquest can be only of himself."

I shivered. That was what Mallory had said.

"You damned old humbug!" Barbank's laugh roared out. "Are you trying to tell me *you* can help me reach the top?"

"I think I'd put it differently," the Holy Man replied. "To be precise, I must say this. You never will achieve your heart's desire without my aid. Your way of doing things is not quite good enough."

Barbank's neck reddened. "Oh, isn't it?" he snarled. "Well, come along and watch! I can use one more mangy porter, I suppose."

The Holy Man raised his fragile hands. "Thank you—but no," he said gently.

Barbank spat in the dust. He pivoted and strode off, pushing roughly through the murmuring crowd.

It was then I decided that he must never be the Man on Top.

It is a long way from Darjeeling through Nepal to that dreadful mountain which the Tibetans call the Father of the Snows. The journey takes some weeks. We were eleven white men, but we soon found that we were not an expedition in the usual sense. We were Barbank's retainers, walled off by his contempt.

The others left him pretty much alone. I couldn't. The Holy Man's prediction was my obsession now. At every chance, I talked to Barbank about the mysteries of the peak—the awful Snowmen, whom the Tibetans all swear exist, and the same dark, pulsating flying things which Smythe had seen high on haunted Everest. I said that, very possibly, Madsen, James and Leverhome had reached the summit

first—that he might get to be the Man on Top only to find some evidence they'd left.

By the time we reached our Base Camp on the Great East Glacier, I had become his enemy, who had to be put to shame. And there was only one way to do that. Though Kenningshaw and Lane were better men, he chose me for the assault. I had to *be* there, to see the Man on Top with my own eyes. That was fine. Because I could only stop Barbank from being first on top by being first myself.

We followed the traditional approach—up the Great East Glacier and the West Wall of the South Col—up to Camp Five, nearly five miles above the sea. And, all the way, the mountain laughed at us. Against us, it sent its cruel light cavalry, wind, mist and snow—harassing us, keeping us aware of deadly forces held in reserve.

Yet, when we stood at Camp Five and watched the plane from India trying to drop the final camp higher than any man had camped before, the sky was clear. We watched the pilot try, and circle, and lose eight separate loads. The ninth remained; its grapples held.

"I bought two dozen, all identical," said Barbank. "I told you there's nothing these natives do that we can't do better."

He and I reached Camp Six, at over twenty-six thousand feet, late the next afternoon. We set the tent up, and weighted it with cylinders of oxygen. We ate supper out of self-heating cans and crawled into our sleeping bags.

We rose before dawn, and found that the fine weather still held. Barbank looked at the vast dark mountain, at the broad yellow band beneath the summit pyramid, at the depths of rock and glacial ice below.

"And so I won't succeed?" he taunted me. "*You bloody fool.*"

We went up. We mounted to the ridge, and stared down the awful precipice of the South Face. We worked toward the second step, where James and Leverhome were last seen. Small, keen lancets of wind thrust through our clothes down to the flowing blood. The summit was hidden behind its plume of cloud.

Toward that plume we worked. Even with oxygen, it

was agony. Up there, the air is thin. The thinness is in your flesh and bones, and in your brain. You move, and pause, and your whole attention is confined to the next move.

On such a mountain, physically, there can be no question over who shall lead. But morally there can. I can remember husbanding my strength, giving Barbank a grudging minimum of aid. I can remember Barbank weakening, relinquishing the lead high on a summit slab. I can remember the look in Barbank's eyes.

The hours dragged. I moved. I ached. I forced myself to try to move again. Endlessly.

Then, without warning, the cloud-plume enfolded us. The Top of the World was fifty feet away. I knew that I could be the Man on Top, that I had Barbank where I wanted him. I stopped. I don't know why. I laughed and waved him on. He passed by, hating me.

He reached the summit edge. He turned his head. I could not see his lips, but I could feel their curl of triumph and their contempt. He turned again. And, as he turned, a single gust screamed past us and laid the summit bare. I saw its rock. I saw a wide depression packed with snow.

But in the center there was no snow at all, for it had melted. On his mat, naked and serene, the Holy Man was waiting. He smiled upon us with his statue's smile.

In that tone of pleased surprise with which one welcomes an unexpected guest, he spoke to Barbank. "How did you get up here?"

A strange sound came from Barbank's leather mask. Automatically, he pointed—at the harsh summit, the ridge, the slabs, the miles of rock and ice and snow.

The Holy Man lifted both his hands. His gesture was exquisite, polite, incredulous.

"You mean," he said, "*you walked?*"

DAVID'S DADDY

by Rosel George Brown

from *Fantastic Science Fiction*

Call it magic, yoga, illusion, or *psi*, whichever you like. (What's in the name? Why, the way you go about investigating it, mostly....) The still very much unexplored potential of the human mind is, perhaps, today's most challenging frontier.

Mrs. Brown's treatment of the theme is as different from Mr. Bretnor's as *psi* and yoga. But in both (as in Miss Emmett's "Enchantment") there is the same odd background quality of truly fearful loneliness that seems somehow integral to such a story.

Miss Fremmen was a good teacher. Had been for twenty years. She taught fourth grade the year I started teaching. I had fifth grade. I came to her with my problems, which were many and unbearable, at least it seemed so to me.

"What do you do," I asked her despairingly as we stood monitoring the dusty playground during recess, "about going to the bathroom? I mean, one starts and then they *all* want to go. I know they all don't *have* to go, but they say they do. And if I don't let anybody go, there's liable to be an accident. And they're all taking advantage of me. I know they are."

Miss Fremmen's wrinkles gathered into a smile for me. The faintly suspicious smile, the not altogether committal smile teachers cultivate.

"The very first day of class I tell them," she said, drawing herself up to a state of forthright dignity to illustrate how she told them, "little people, I can *tell* when you really have to go to the bathroom and when you don't. So I warn you, I just *warn* you not to ask to be excused unless it's urgent." Miss Fremmen stood there frozen for a moment, clad in what had every appearance of an armored corset

under her thin summer voile, her face square and omniscient, her hair kinky, spatulate, and slightly burned from a recent permanent.

"How marvelous!" I sighed. "But Miss Fremmen, I wouldn't dare try it. I've got a weak face." I didn't say it, but I thought that the corset had a lot to do with it, too. And if I tried to wear a corset I'd have to hold it on with scotch tape.

"Oh, now it's not *weak*," Miss Fremmen said sympathetically, the words scratching grandly over the ancient grate in her throat. You have to talk loud on the playground to be heard at all. "You just haven't learned to frown right. When I was in Normal School we learned how to teach before we graduated. Nowadays they don't teach you anything practical. It's not your fault, Lillian," she went on, grating more gently, "they closed up all the Normal Schools. But you'll learn. Don't worry."

The bell rang, as it always does in the middle of conversations, and we went on up. Paralyzed with admiration, I watched her fourth grade marching silently into the room next to mine. The cadence was perfect. No face was sullen. No face rebellious. Miss Fremmen's wrinkles dropped into a wink for me, and she closed her door silently. My door creaked noisily as I herded in two thirteen-year-old stragglers, both a head taller than me. Then, practicing my Frown, I went about the room collecting the post-recess tribute of marbles, gum, rubber bands, paper clips and an occasional frog. Miss Fremmen, I thought enviously, had probably not had a problem in fifteen years. No one would *think* of chewing gum or clinking marbles or shooting paper clips in *her* class.

But I was wrong about the problem. I noticed her going about with a worried frown after a few weeks. No one else noticed it, because a worried frown differs only in very subtle ways from a natural, authoritarian frown. But I had made a special study of Miss Fremmen, particularly of her facial expressions, and I knew something was wrong.

"Lillian," she told me one day when it was our turn to supervise the playground again. "I've been a teacher a long,

long time." She was breathing in the dust like the purest mountain air, and her eyes darted around, from plain habit, so that no corner escaped her. She frowned. "I don't like that Sansoni boy talking to those third graders," she said. She collared a passing pupil. "Go tell Billy Sansoni I said to play by the big boys." She turned to me. "Billy's going to be just like his daddy." She shook her head fatalistically. Bad blood in the family."

"What were you going to say before?" I asked. I was anxious to know what sort of problem could possibly beset a teacher like Miss Fremen. It had to be a school problem. Miss Fremen didn't have any other life.

"Oh," she said, the worried frown replacing the authoritarian frown, "a very funny thing. Peculiar. In all the years I've been teaching there's never been anything like it. I really ought to tell Mr. Buras. But I don't know. He's a fine principal and a fine disciplinarian, even if he's not allowed to spank any more. But he's not a man to understand anything that's, you know, peculiar."

"Yes?" My curiosity was becoming more vulgar all the time, but I tried to keep it out of my voice.

"You remember that conversation we had back when the term opened? About how to keep the children from making a game out of asking to be excused?"

"I remember it vividly," I answered.

"Well, there's one little boy in my room. Jerome. He's from one of those migratory families. Oil fields or fruit picking. I'm not sure which. This Jerome. I *can* tell when he has to go to the bathroom."

"Well," I said, feeling sort of let down, "that's not very surprising. After all, when you've been around children for so long, little things like their facial expression and their tone of voice . . ."

"Um!" Miss Fremen said emphatically. "No. You don't understand. You see . . . *Get* off those bars, Emanuel. Those are for the swings. You'll kill yourself and I'll get blamed." Emanuel slid down swiftly.

"I know it before he says anything," Miss Fremen went on. "He'll be just sitting there, bent over his workbook. One day I told him, 'All right, Jerome, you may be ex-

cused.' And then the children called it to my attention that he hadn't asked to be excused."

"But he went?"

"Oh, yes. He had to."

"Maybe your imagination," I said, coughing from the dusty air. "After all, they always welcome the chance to get out of the room."

"I've been teaching twenty years," Miss Fremmen said indignantly. "I don't *have* any imagination."

I didn't know whether to grin or not, so I didn't.

"And it isn't only that. You know, they changed the workbooks last year and there are a few things that have different answers now than they did when I was a girl, and several times Jerome has given *my* answers, and how would he know . . ."

At that moment the bell rang and I didn't think much more about it, being busy keeping my class in line and being annoyed with Jerry Dufossat, who was leering at me with gum in his mouth.

It was that afternoon we had the bomb scare. It is also one of the few times in my life I've been left absolutely alone with a decision, and done the unobvious thing, because it was such a terrible chance to take.

You know, teachers do a lot of things beside teach. And we have to worry about a lot of things besides whether Johnny can read.

One of the things we have to worry about is the children's safety. And for that, one of the last things in the world we want to see is a strange man hanging around the school yard.

Well, I saw one, that lunch hour, but he just walked around the block and watched the children and didn't try to talk to them or come into the school yard, so I just kept an eye on him. He was a slouched, dull-eyed man, and he looked so much like a degenerate character I decided he must be an actor practicing.

The second time he came around the block I went over and asked if he were the father of one of the children in the school yard.

"Yeah," he said, pointing indeterminately, and slouched on.

He smelled like liquor. But sometimes it's cough syrup and he *did* have a cough. A hack, now and then, like a comment on whatever dreary thoughts such a man must have.

The more I thought about it, the more I thought I'd better call him back and tell him to take his postprandial strolls somewhere else, because teachers have to be *very* nervy, but just then the bell rang—and you can't imagine how many problems are solved, or never get solved, because bells ring.

Well, I was thinking I'd better send a little note to Mr. Buras but first I had to collect the impedimenta the kids had left on the playground—the latest thing was pornographic telescopes—and then we had arithmetic which is always a strain on me because I've never really adjusted to the fact that $\frac{1}{4} + \frac{1}{4} = \frac{1}{2}$.

Anyway, by two o'clock I was just getting around to the note and had five fraction problems on the board for the children to do—when the door opened and in he walked.

I didn't like the way he walked.

Nor the way he looked.

Cough medicine, to my knowledge, does not produce this effect.

"He's drunk," someone whispered.

"Nah, crazy," someone else whispered and I gave them my Look which, after several months, was really getting rather good.

It's too bad fifth-grade children know what drunkenness is. But they do, you know. You have to resign yourself to all sorts of things about children.

I gave the man my Look, too, and he appeared very ill at ease, because sometimes even grown people feel overawed when they walk into a school. Especially the kind of grown people who used to get called to the principal's office all the time.

"I come," he began, and wiped the back of his hand across his mouth. "Come for my son."

I looked around the room. There was David Mines, a

shy child strung too tall for his weight, sitting immobile. Only tears moved in his eyes. That would be the one.

"School is not out until three o'clock," I said. "Unless there is some unusual reason I cannot let David go." Normally, of course, I wouldn't even question a parent coming for a child early. But not with that expression on David's face.

"Got a reason," Mr. Mines said. "My boy. *David!*" he called to the boy. But he was unsure of himself. He was a man used to being pushed around. It was obviously hard for him to stand on his own two feet.

Literally and figuratively.

"Sit down, David!" I said peremptorily. A thought was coming to me with cold horror. And it was such a bad thought I tried to hide from it. But I could not.

"Sit down, please, Mr. Mines," I continued, in the same tone I used with David. "In the last desk on the row next to the windows." Because I recalled the recent case of the man who set off a bomb in a school yard. And although everybody did what they could and did what was expected and the school authorities were not to be blamed—well, perhaps it might be better in such a case not to do what was to be expected.

Like . . . like what?

Of course, I had no real reason to think Mr. Mines had set a bomb anywhere. Maybe he'd just come to take David for a dental appointment and what with the cough medicine and my authoritative attitude, he was too confused to say so.

On the other hand, I could feel there was something odd about the whole thing.

The proper thing to do was send the man to Mr. Buras.

In which case Mr. Buras would see only two choices. Put the man out, by force if necessary, if he seemed dangerously drunk, or take David out of school and make him go with his daddy. And why not, except for my intuition?

Mr. Mines sat there, overflowing the little desk, his feet shifty, some internal discomfort making a line between his brows.

"Please wait a few moments, Mr. Mines. We have our

spelling lesson now and it's very important that David should not miss it. Children, get out your spellers."

We had had our spelling lesson, of course, at eleven o'clock in the morning.

Not a child betrayed me. The room was silent as the grave.

"Page thirty-four," I said. And the monotonous chant began. "Desert, D-E-S-E-R-T." What was I going to do? What was Mr. Mines thinking, sitting there? If only I could read his . . . Jerome!

SEND ME JEROME, I wrote on a slip of paper.

"Who's the messenger for today?" I asked, as casually as possible, between Government and Guide.

Joyce stood up, her lightboned face a little pink with excitement, but shoulders square and fully up to whatever responsibility I was going to put on her.

Mr. Mines was looking suspiciously at the note.

"It's for Miss Fremen in the fourth grade," I told Joyce, loud enough for all to hear. "Tell her it's for the book lists."

Miss Fremen might well wonder what Jerome had to do with the book lists. But Miss Fremen was not one to waste time satisfying idle curiosity on a busy school day.

"L-A-U-G-H, laugh!"

Mr. Mines didn't have anything with him that looked like a bomb. But it would have been easy enough for him to sneak a suitcase in when classes were going on after lunch and hide it somewhere. In a lavatory or a broom closet.

I could just let him take David out and have the school searched. But suppose it was where no one could find it?

Or I could ask Mr. Buras to clear the school. On what grounds? That David's daddy looked like a bum? In this neighborhood a good third of the daddies looked like bums. Hell, they *are* bums. Mr. Buras couldn't clear the school every time one of them came around—not that this kind of daddies make a habit of coming around.

Mr. Mines was watching the clock, his face silvery with perspiration where the sun caught it. Every time the clock hand jumped another minute Mr. Mines passed his hand over his forehead.

"Spelling lesson's over," he said, when we got to "yule." He stood up uncertainly. "C'mon, David."

"David may not be excused yet," I said firmly. "We have to make a sentence with each of the words."

Mr. Mines stood there, awkward, by the little desk. "Then I'll have to leave without him."

Why not?

The room was so quiet you would have thought all the children had stopped breathing at once.

"Thunk!" went the minute hand of the clock.

"You may not be excused," I snapped, sure this would not work, wondering where I got that kind of nerve.

Mr. Mines sat back down, his eyes dull. "Yes, ma'am," he said. Then he looked at the clock and stood up again. "How long?" he asked, and he wiped at the edge of his mouth.

"Half an hour," I said. I gripped the end of a ruler tightly in my right hand and stood in front of the class, tapping the ruler into the palm of my left hand. "Delia," I said, "make a sentence with 'automatic' showing you know what the word means."

"Thunk!" went the minute hand of the clock as Delia stood up and the class waited for her somewhat ponderous mind to get into action.

Where was Jerome?

"Half an hour's too long," Mr. Mines said.

"Automatic," said Delia slowly, "we have an automatic defroster on our refrigerator."

"Um," I said. "You used the word right, but can someone else give us a sentence to show what the word means?"

Several hands went up.

Mr. Mines was edging across the back of the room.

Where was Jerome?

"Just a moment," I said, slapping the ruler hard against my palm.

"Have to get out of here," he said. But he was edging slowly, moving his feet carefully, as though he thought this was making him invisible.

"Please stay where you are a moment," I said. "Emily, let us hear your sentence."

"An automatic dishwasher washes the dishes by itself without you having to do anything," said Emily with her usual prim correctness. Emily always wore starched plaid dresses with little white collars, and I couldn't help wondering if this were not what made her right all the time.

"Very good," I said. "The 'auto' part of the word means 'self.' Like an automobile is something that runs by itself instead of having to be pulled by horses." I hunted around in my distracted mind for other "auto" words suitable for the fifth grade.

"*Thunk!*" went the clock.

The door clattered, creaked and opened, and in came Joyce leading Jerome. Joyce carefully closed the door behind her and led Jerome to where I was standing in front of the blackboard.

What now?

Gerald had his hand up, swelling out of his desk with eagerness. Poor Gerald so seldom knew anything at all that whenever his hand was one of the raised ones, I called on him. "Yes, Gerald?"

"An autocrat," he said, triumphantly remembering from the morning spelling lesson, "is a man who is king all by himself instead of having a president and senators."

Jerome just stood there. Wondering, no doubt, what forgotten misdemeanor on the playground I might want to scold him about.

I wondered what it was I had expected him to do about Mr. Mines.

"Jerome," I said, taking him by the shoulders and turning him to face the back of the room, "this is David's daddy, Mr. Mines."

Puzzled, Jerome looked.

Mr. Mines was at the door, his hand on the knob, his face pale and frightened.

"*Thunk!*" went the clock.

Suddenly I could feel Jerome's little body grow taut under my hands, and he looked around at me with bottomless eyes.

"It's going to blow up," he said, "when the hands are like *that*." And he made two-thirty with his arms.

I swallowed and looked around at the clock.

"*Thunk!*"

Two twenty-five.

"*Bang!*" went the door. It was Mr. Mines, gone.

And Jerome and I were alone with it. We were the only ones who really *knew*.

"Monitor!" I said, and Gerard marched up and came to the front of the class.

"Messenger!" I said, and Delia marched up. "Get Mr. Buras immediately.

I brought Jerome outside the room and closed the door behind me. It was too late to try to catch Mr. Mines. It was too late for almost anything. It was all up to Jerome, now.

Through the glass-topped door I could see David with his head down on his desk, quietly sobbing. He didn't know about the bomb. But he knew about his daddy. And now everyone else did, too.

"*Thunk!*" went the clock in the hall.

"Where is it, Jerome?"

"A dark place," he said. "A little place."

I ran down the hall to the broom closet.

Mr. Buras came out of his office with Delia.

"Go back into the room, Delia," I said. "*Run.*"

She ran.

"There's a bomb in the school," I said. "I'm finding it now. We have four minutes."

"I'll fill a washtub with water," he said, "while I get the kids out and call the police."

There was no time to find out how I knew or if I was crazy.

He looked into the seventh-grade room and called out three of the big boys.

He rang the bell for fire drill. But there wouldn't be time. Time. I hoped my class would know enough to follow Miss Fremmen's and get out safely without me.

Jerome and I ran to the little room where old books and the movie projector are kept. He shook his head.

"Which way?" I asked.

He didn't know. Only he would know the room if he saw it.

I waved my class toward Miss Fremmen's room as they came filing out. One look and she took them over.

Small, dark room. Jerome and I ran down the stairs to the boys' lavatory. He shook his head.

Girls' lavatory.

No.

Dear God!

We rushed in and out of cloak rooms.

No.

No.

No.

"Jerome," I said. "You've *got* to. What else besides small, dark room?"

"Scared. Very scared."

"Of course. What else?"

"No. Scared of a whipping. Scared of God."

"Scared of . . ." I dragged Jerome into Mr. Buras's office. "Surely not here? And it isn't small and dark."

"Almost," said Jerome, "This is how it feels, but this isn't where it is."

I looked around the office. So bare and clean. No big, empty boxes with small, dark places in them.

"The john!" I cried, for there is a little men's room attached to the principal's office. I yanked open the door.

"Yes!" said Jerome. "Oh, quickly!"

Yes, but where? Such a bare, clean little room. He must have slipped in during lunch hour, probably even before I saw him hanging around the playground.

Where? Just walls, the wash basin—the radiator! It was too warm a day for the heat to be on and perhaps there was room behind—there it was!

"Run, Jerome," I cried, and I edged the thing out carefully. It was a briefcase affair, with one broken handle. A sad, forgotten briefcase.

But Jerome didn't run. He hung on to the back of my skirt and followed me into the teachers' washroom where I could hear the washtub filling up.

I threw the briefcase into the washtub, and splashed water all over Jerome and me, and I pulled him out of the room and closed the door behind me and sat down in the middle of the hall and had hysterics.

Mr. Buras was there and it was a while before I realized he had two aspirin tablets and a glass of water for me.

"Thank you," I said. "Oh, dear *God*."

"Come in my office and sit down," Mr. Buras said. "The police will be here any minute. Maybe they can catch him. If you can describe him."

I stood up as best I could, ashamed of having broken down in front of Jerome. Children are terribly frightened when grown people lose control.

We walked through the hollow school, so strange with all the children outside. I looked down at Jerome. Those eyes! I thought of the things he must know, with that reaching mind of his. He knew. He knew the most frightful thing there is to know in the whole world. That there is nobody, nobody at all who is sure about anything. Children should not have to know this thing.

"*Can* you describe him? Do you know who it was?"

I paused, passing the door of my room, for something caught my eye through the glass.

It was David, his head still in his arms, all alone, waiting for the fire to come. So many things were worse than death.

"It was . . ." Why did I have to be the one to tell? Why was this responsibility mine?

I looked at Jerome. His, too. So many responsibilities would be his.

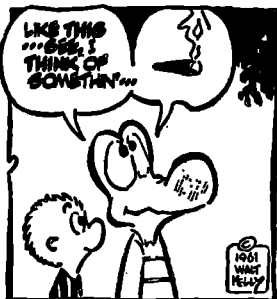
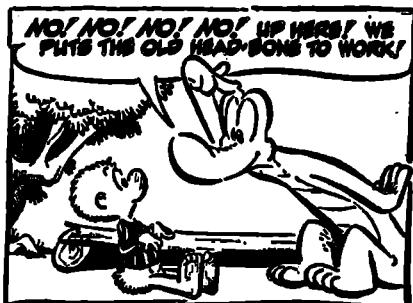
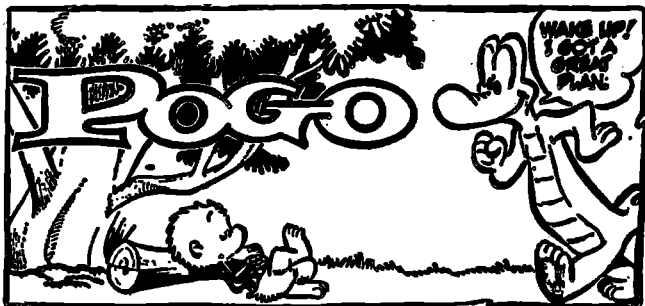
"It was David's father," I said, and I went in to David.

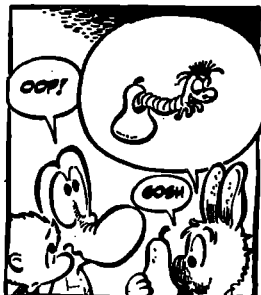
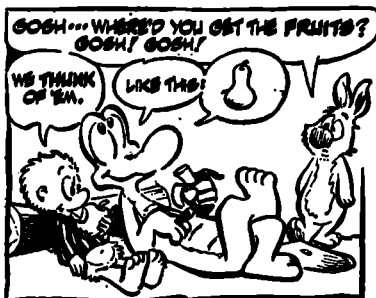
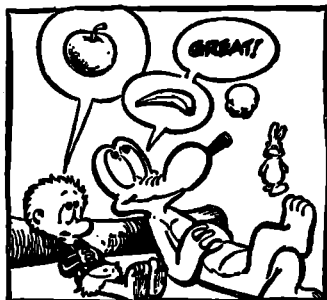
Maybe there would be some assurance I could give David. But not Jerome.

For he would know assurance was not mine to give. Nor anyone else's.

THE THINKERS

by Walt Kelly





SOMETHING BRIGHT

by Zenna Henderson

from *Galaxy Magazine*

Readers of those earlier S-F annuals in which Miss Henderson's chronicles of *The People* appeared ("Pottage" in 1956, "Wilderness" in 1958) will be happy to know that the long-delayed publication of the complete series is at last a fact ("*Pilgrimage: The Book of the People*," Doubleday, 1961).

Miss Henderson is, in private life, a schoolteacher in the primary grades, and most of her stories about children have been from the viewpoint of the sympathetic adult. This time she tells it through the child's own mind and eyes.

Do you remember the Depression? That black shadow across time? That hurting place in the consciousness of the world? Maybe not. Maybe it's like asking do you remember the Dark Ages. Except what would I know about the price of eggs in the Dark Ages? I knew plenty about prices in the Depression.

If you had a quarter—*first find your quarter*—and five hungry kids, you could supper them on two cans of soup and a loaf of day-old bread, or two quarts of milk and a loaf of day-old bread. It was filling and—in an after-thoughty kind of way—nourishing. But if you were one of the hungry five, you eventually began to feel erosion set in, and your teeth ached for substance.

But to go back to eggs. Those were a precious commodity. You savored them slowly or gulped them eagerly—unmistakably as eggs—boiled or fried. That's one reason why I remember Mrs. Klevity. She had eggs for *breakfast!* And *every day!* That's *one* reason why I remember Mrs. Klevity.

I didn't know about the eggs the time she came over to see

Mom, who had just got home from a twelve-hour day, cleaning up after other people at thirty cents an hour. Mrs. Klevity lived in the same court as we did. Courtesy called it a court because we were all dependent on the same shower house and two toilets that occupied the shack square in the middle of the court.

All of us except the Big House, of course. It had a bathroom of its own and even a radio blaring *Nobody's Business* and *Should I Reveal* and had ceiling lights that didn't dangle nakedly at the end of a cord. But then it really wasn't a part of the court. Only its back door shared our area, and even that was different. It had *two* back doors in the same frame—a screen one and a wooden one!

Our own two-room place had a distinction too. It had an upstairs. One room the size of our two. The Man Upstairs lived up there. He was mostly only the sound of footsteps overhead and an occasional cookie for Danna.

Anyway, Mrs. Klevity came over before Mom had time to put her shopping bag of work clothes down or even to unpleat the folds of fatigue that dragged her face down ten years or more of time to come. I didn't much like Mrs. Klevity. She made me uncomfortable. She was so solid and slow-moving and so nearly blind that she peered frighteningly wherever she went. She stood in the doorway as though she had been stacked there like bricks and a dress drawn hastily down over the stack and a face sketched on beneath a fuzz of hair. Us kids all gathered around to watch, except Danna who snuffled wearily into my neck. Day nursery or not, it was a long, hard day for a four-year-old.

"I wondered if one of your girls could sleep at my house this week." Her voice was as slow as her steps.

"At your house?" Mom massaged her hand where the shopping-bag handles had crisscrossed it. "Come in. Sit down." We had two chairs and a bench and two apple boxes. The boxes scratched bare legs, but surely they couldn't cratch a stack of bricks.

"No, thanks." Maybe she couldn't bend! "My husband ill be away several days and I don't like to be in the house one at night."

"Of course," said Mom. "You must feel awfully alone."

The only aloneness *she* knew, what with five kids and two rooms, was the taut secretness of her inward thoughts as she mopped and swept and ironed in other houses. "Sure, one of the girls would be glad to keep you company." There was a darting squirm and LaNell was safely hidden behind the swaying of our clothes in the diagonally curtained corner of the Other room, and Kathy knelt swiftly just beyond the dresser, out of sight.

"Anna is eleven." I had no place to hide, burdened as I was with Danna. "She's old enough. What time do you want her to come over?"

"Oh, bedtime will do." Mrs. Klevity peered out the door at the darkening sky. "Nine o'clock. Only it gets dark before then—" Bricks can look anxious, I guess.

"As soon as she has supper, she can come," said Mom, handling my hours as though they had no value to me. "Of course she has to go to school tomorrow."

"Only when it's dark," said Mrs. Klevity. "Day is all right. How much should I pay you?"

"Pay?" Mom gestured with one hand. "She has to sleep anyway. It doesn't matter to her where, once she's asleep. A favor for a friend."

I wanted to cry out: whose favor for what friend? We hardly passed the time of day with Mrs. Klevity. I couldn't even remember Mr. Klevity except that he was straight and old and wrinkled. Uproot me and make me lie in a strange house, a strange dark, listening to a strange breathing, feeling a strange warmth making itself part of me for all night long, seeping into me . . .

"Mom—" I said.

"I'll give her breakfast," said Mrs. Klevity. "And lunch money for each night she comes."

I resigned myself without a struggle. Lunch money each day—a whole dime! Mom couldn't afford to pass up such a blessing, such a gift from God, who unerringly could be trusted to ease the pinch just before it became intolerable.

"Thank you, God," I whispered as I went to get the can opener to open supper. For a night or two I could stand it.

I felt all naked and unprotected as I stood in my flimsy crinkle cotton pajamas, one bare foot atop the other, waiting for Mrs. Klevity to turn the bed down.

"We have to check the house first," she said thickly. "We can't go to bed until we check the house."

"Check the house?" I forgot my starchy stiff shyness enough to question. "What for?"

Mrs. Klevity peered at me in the dim light of the bedroom. They had *three* rooms for only the two of them! Even if there was no door to shut between the bedroom and the kitchen.

"I couldn't sleep," she said, "unless I looked first. I have to."

So we looked. Behind the closet curtain, under the table—Mrs. Klevity even looked in the portable oven that sat near the two-burner stove in the kitchen.

When we came to the bed, I was moved to words again. "But we've been in here with the doors locked ever since I got here. What could possibly—"

"A prowler?" said Mrs. Klevity nervously, after a brief pause for thought. "A criminal?"

Mrs. Klevity pointed her face at me. I doubt if she could see me from that distance. "Doors make no difference," she said. "It might be when you least expect, so you have to expect all the time."

"I'll look," I said humbly. She was older than Mom. She was nearly blind. She was one of God's *Also Unto Me's*.

"No," she said. "I have to. I couldn't be sure, else."

So I waited until she grunted and groaned to her knees, then bent stiffly to lift the limp spread. Her fingers hesitated briefly, then flicked the spread up. Her breath came out flat and finished. Almost disappointed, it seemed to me.

She turned the bed down and I crept across the gray, wrinkled sheets and, turning my back to the room, I huddled one ear on the flat tobacco-smelling pillow and lay tense and uncomfortable in the dark, as her weight shaped and reshaped the bed around me. There was a brief silence before I heard the soundless breathy shape of her words, "How long, O God, how long?"

I wondered through my automatic *Bless Papa and Mama*

—and the automatic back-up because Papa had abdicated from my specific prayers—*bless Mama and my brother and sisters*—what it was that Mrs. Klevity was finding too long to bear.

After a restless waking, dozing sort of night that strange sleeping places held for me, I awoke to a thin, chilly morning and the sound of Mrs. Klevity moving around. She had set the table for breakfast, a formality we never had time for at home. I scrambled out of bed and into my clothes with only my skinny, goosefleshed back between Mrs. Klevity and me for modesty. I felt uncomfortable and unfinished because I hadn't brought our comb over with me.

I would have preferred to run home to our usual breakfast of canned milk and shredded wheat, but instead I watched, fascinated, as Mrs. Klevity struggled with lighting the kerosene stove. She bent so close, peering at the burners with the match flaring in her hand that I was sure the frowzy brush of her hair would catch fire, but finally the burner caught instead and she turned her face toward me.

"One egg or two?" she asked.

"Eggs! Two!" Surprise wrung the exclamation from me. Her hand hesitated over the crumpled brown bag on the table. "No, no!" I corrected her thought hastily. "One. One is plenty." And sat on the edge of a chair watching as she broke an egg into the sizzling frying pan.

"Hard or soft?" she asked.

"Hard," I said casually, feeling very woman-of-the-world-ish, dining out—well, practically—and for breakfast, too! I watched Mrs. Klevity spoon the fat over the egg, her hair swinging stiffly forward when she peered. Once it even dabbled briefly in the fat, but she didn't notice and, as it swung back, it made a little shiny curve on her cheek.

"Aren't you afraid of the fire?" I asked as she turned away from the stove with the frying pan. "What if you caught on fire?"

"I did once." She slid the egg out onto my plate. "See?" She brushed her hair back on the left side and I could see the mottled pucker of a large old scar. "It was before I got used to Here," she said, making Here more than the house, it seemed to me.

"That's awful," I said, hesitating with my fork.

"Go ahead and eat," she said. "Your egg will get cold." She turned back to the stove and I hesitated a minute more. Meals at a table you were supposed to ask a blessing, but . . . I ducked my head quickly and had a mouthful of egg before my soundless amen was finished.

After breakfast I hurried back to our house, my lunch-money dime clutched securely, my stomach not quite sure it liked fried eggs so early in the morning. Mom was ready to leave, her shopping bag in one hand, Danna swinging from the other, singing one of her baby songs. She *liked* the day nursery.

"I won't be back until late tonight," Mom said. "There's a quarter in the corner of the dresser drawer. You get supper for the kids and try to clean up this messy place. We don't have to be pigs just because we live in a place like this."

"Okay, Mom." I struggled with a snarl in my hair, the pulling making my eyes water. "Where you working today?" I spoke over the clatter in the other room where the kids were getting ready for school.

She sighed, weary before the day began. "I have three places today, but the last is Mrs. Paddington." Her face lightened. Mrs. Paddington sometimes paid a little extra or gave Mom discarded clothes or left-over food she didn't want. She was nice.

"You get along all right with Mrs. Klevity?" asked Mom as she checked her shopping bag for her work shoes.

"Yeah," I said. "But she's funny. She looks under the bed before she goes to bed."

Mom smiled. "I've heard of people like that, but it's usually old maids they're talking about."

"But, Mom, nothing coulda got in. She locked the door after I got there."

"People who look under beds don't always think straight," she said. "Besides, maybe she'd *like* to find something under there."

"But she's *got* a husband," I cried after her as she herded Danna across the court.

"There are other things to look for besides husbands," she called back.

"Anna wants a husband! Anna wants a husband." Deet and LaNell were dancing around me, teasing me sing-song. Kathy smiled slowly behind them.

"Shut up," I said. "You don't even know what you're talking about. Go on to school."

"It's too early," said Deet, digging his bare toes in the dust of the front yard. "Teacher says we get there too early."

"Then stay here and start cleaning house," I said.

They left in a hurry. After they were gone, Deet's feet reminded me I'd better wash my own feet before I went to school. So I got a washpan of water from the tap in the middle of the court and, sitting on the side of the bed, I eased my feet into the icy water. I scrubbed with the hard, gray, abrasive soap we used and wiped quickly on the tattered towel. I threw the water out the door and watched it run like dust-covered snakes across the hard-packed front yard.

I went back to put my shoes on and get my sweater. I looked at the bed. I got down on my stomach and peered under. *Other things to look for.* There was a familiar huddle of cardboard cartons we kept things in and the familiar dust fluffs and one green sock LaNell had lost last week, but nothing else.

I dusted my front off. I tied my lunch-money dime in the corner of a handkerchief and, putting my sweater on, left for school.

I peered out into the windy wet semi-twilight. "Do I have to?"

"You said you would," said Mom. "Keep your promises. You should have gone before this. She's probably been waiting for you."

"I wanted to see what you brought from Mrs. Paddington's." LaNell and Kathy were playing in the corner with a lavender hug-me-tight and a hat with green grapes on it. Deet was rolling an orange on the floor, softening it, preliminary to poking a hole in it to suck the juice out.

"She cleaned a trunk out today," said Mom. "Mostly old things that belonged to her mother, but these two coats are nice and heavy. They'll be good covers tonight. It's going to

be cold. Someday when I get time, I'll cut them up and make quilts." She sighed. Time was what she never had enough of. "Better take a newspaper to hold over your head."

"Oh, Mom!" I huddled into my sweater. "It isn't raining now. I'd feel silly!"

"Well, then, scoot!" she said, her hand pressing my shoulder warmly, briefly.

I scooted, skimming quickly the flood of light from our doorway, and splishing through the shallow run-off stream that swept across the court. There was a sudden wild swirl of wind and a vindictive splatter of heavy, cold raindrops that swept me, exhilarated, the rest of the way to Mrs. Klevity's house and under the shallow little roof that was just big enough to cover the back step. I knocked quickly, brushing my disordered hair back from my eyes. The door swung open and I was in the shadowy, warm kitchen, almost in Mrs. Klevity's arms.

"Oh!" I backed up, laughing breathlessly. "The wind blew—"

"I was afraid you weren't coming." She turned away to the stove. "I fixed some hot cocoa."

I sat cuddling the warm cup in my hands, savoring the chocolate sip by sip. She had made it with milk instead of water, and it tasted rich and wonderful. But Mrs. Klevity was sharing my thoughts with the cocoa. In that brief moment when I had been so close to her, I had looked deep into her dim eyes and was feeling a vast astonishment. The dimness was only on top. Underneath—underneath—

I took another sip of cocoa. Her eyes—almost I could have walked into them, it seemed like. Slip past the gray film, run down the shiny bright corridor, into the live young sparkle at the far end.

I looked deep into my cup of cocoa. Were all grownups like that? If you could get behind their eyes, were they different, too? Behind Mom's eyes, was there a corridor leading back to youth and sparkle?

I finished the cocoa drowsily. It was still early, but the rain was drumming on the roof and it was the kind of night you curl up to if you're warm and fed. Sometimes you feel

thin and cold on such nights, but I was feeling curl-uppy. So I groped under the bed for the paper bag that had my jammas in it. I couldn't find it.

"I swept today," said Mrs. Klevity, coming back from some far country of her thoughts. "I musta pushed it farther under the bed."

I got down on my hands and knees and peered under the bed. "Ooo!" I said. "What's shiny?"

Something snatched me away from the bed and flung me to one side. By the time I had gathered myself up off the floor and was rubbing a banged elbow, Mrs. Klevity's bulk was pressed against the bed, her head under it.

"Hey!" I cried indignantly, and then remembered I wasn't at home. I heard an odd whimpering sob and then Mrs. Klevity backed slowly away, still kneeling on the floor.

"Only the lock on the suitcase," she said. "Here's your jammas." She handed me the bag and ponderously pulled herself upright again.

We went silently to bed after she had limped around and checked the house, even under the bed again. I heard that odd breathy whisper of a prayer and lay awake, trying to add up something shiny and the odd eyes and the whispering sob. Finally I shrugged in the dark and wondered what I'd pick for funny when I grew up. All grownups had some kind of funny.

The next night Mrs. Klevity couldn't get down on her knees to look under the bed. She'd hurt herself when she plumped down on the floor after yanking me away from the bed.

"You'll have to look for me tonight," she said slowly, nursing her knees. "Look good. Oh, Anna, look good!"

I looked as good as I could, not knowing what I was looking for.

"It should be under the bed," she said, her palms tight on her knees as she rocked back and forth. "But you can't be sure. It might miss completely."

"What might?" I asked, hunkering down by the bed.

She turned her face blindly toward me. "The way out," she said. "The way back again—"

"Back again?" I pressed my cheek to the floor again. "Well, I don't see anything. Only dark and suitcases."

"Nothing bright? Nothing? Nothing—" She tried to lay her face on her knees, but she was too unbendy to manage it, so she put her hands over her face instead. Grownups aren't supposed to cry. She didn't quite, but her hands looked wet when she reached for the clock to wind it.

I lay in the dark, one strand of her hair tickling my hand where it lay on the pillow. Maybe she was crazy. I felt a thrill of terror fan out on my spine. I carefully moved my hand from under the lock of hair. How can you find a way *out* under a *bed*? I'd be glad when Mr. Klevity got home, eggs or no eggs, dime or no dime.

Somewhere in the darkness of the night, I was suddenly swimming to wakefulness, not knowing what was waking me but feeling that Mrs. Klevity was awake too.

"Anna." Her voice was small and light and silver. "Anna—"

"Hummm?" I murmured, my voice still drowsy.

"Anna, have you ever been away from home?" I turned toward her, trying in the dark to make sure it was Mrs. Klevity. She sounded so different.

"Yes," I said. "Once I visited Aunt Katie at Rocky Butte for a week."

"Anna." I don't know whether she was even hearing my answers; her voice was almost a chant, "Anna have you ever been in prison?"

"No! Of course not!" I recoiled indignantly. "You have to be awful bad to be in prison."

"Oh, no. Oh, no!" she sighed. "Not jail, Anna. Prison, prison. The weight of the flesh—bound about—"

"Oh," I said, smoothing my hands across my eyes. She was talking to a something deep in me that never got talked to, that hardly even had words. "Like when the wind blows the clouds across the moon and the grass whispers along the road and all the trees pull like balloons at their trunks and one star comes out and says 'Come' and the ground says 'Stay' and part of you tries to go and it hurts—" I could feel the slender roundness of my ribs under my pressing hands. "And it hurts—"

"Oh, Anna, Anna!" The soft, light voice broke. "You feel that way and you *belong* Here. You won't ever—"

The voice stopped and Mrs. Klevity rolled over. Her next words came thickly, as though a gray film were over them as over her eyes. "Are you awake, Anna? Go to sleep, child. Morning isn't yet."

I heard the heavy sigh of her breathing as she slept. And finally I slept too, trying to visualize what Mrs. Klevity would look like if she looked like the silvery voice-in-the-dark.

I sat savoring my egg the next morning, letting my thoughts slip in and out of my mind to the rhythm of my jaws. What a funny dream to have, to talk with a silver-voiced someone. To talk about the way blowing clouds and windy moonlight felt. But it wasn't a dream! I paused with my fork raised. At least not my dream. But how can you tell? If you're part of someone else's dream, can it still be real for you?

"Is something wrong with the egg?" Mrs. Klevity peered at me.

"No—no—" I said, hastily snatching the bite on my fork. "Mrs. Klevity—"

"Yes." Her voice was thick and heavy-footed.

"Why did you ask me about being in prison?"

"Prison?" Mrs. Klevity blinked blindly. "Did I ask you about prison?"

"Someone did—I thought—" I faltered, shyness shutting down on me again.

"Dreams." Mrs. Klevity stacked her knife and fork on her plate. "Dreams."

I wasn't quite sure I was to be at Klevity's the next evening. Mr. Klevity was supposed to get back sometime during the evening. But Mrs. Klevity welcomed me.

"Don't know when he'll get home," she said. "Maybe not until morning. If he comes early, you can go home to sleep and I'll give you your dime anyway."

"Oh, no," I said, Mom's teachings solidly behind me. "I couldn't take it if I didn't stay."

"A gift," said Mrs. Klevity.

We sat opposite one another until the silence stretched too thin for me to bear.

"In olden times," I said, snatching at the magic that drew stories from Mom, "when you were a little girl—"

"When I was a girl—" Mrs. Klevity rubbed her knees with reflective hands. "The other Where. The other When."

"In olden times," I persisted, "things were different then."

"Yes." I settled down comfortably, recognizing the reminiscent tone of voice. "You do crazy things when you are young." Mrs. Klevity leaned heavily on the table. "Things you have no business doing. You volunteer when you're young." I jerked as she lunged across the table and grabbed both my arms. "But I *am* young! Three years isn't an eternity. I *am* young!"

I twisted one arm free and pried at her steely fingers that clamped my other one.

"Oh." She let go. "I'm sorry. I didn't mean to hurt you."

She pushed back the tousled brush of her hair.

"Look," she said, her voice was almost silver again. "Under all this—this grossness, I'm still me. I thought I could adjust to anything, but I had no idea that they'd put me in such—" She tugged at her sagging dress. "not the clothes!" she cried. "Clothes you can take off. But this—" Her fingers dug into her heavy shoulder and I could see the bulge of flesh between them.

"If I knew *anything* about the setup maybe I could locate it. Maybe I could call. Maybe—"

Her shoulders sagged and her eyelids dropped down over her dull eyes.

"It doesn't make any sense to you," she said, her voice heavy and thick again. "To you I'd be old even There. At the time it seemed like a perfect way to have an odd holiday and help out with research, too. But we got caught."

She began to count her fingers, mumbling to herself. "Three years There, but Here that's—eight threes are—" She traced on the table with a blunt forefinger, her eyes close to the old, wornout cloth.

"Mrs. Klevity," My voice scared me in the silence, but I was feeling the same sort of upsurge that catches you sometimes when you're playing-like and it gets so real. "Mrs.

Klevity, if you've lost something, maybe I could look for it for you."

"You didn't find it last night," she said.

"Find what?"

She lumbered to her feet. "Let's look again. Everywhere. They'd surely be able to locate the house."

"What are we looking for?" I asked, searching the portable oven.

"You'll know it when we see it," she said.

And we searched the whole house. Oh, such nice things! Blankets, not tattered and worn, and even an extra one they didn't need. And towels with wash rags that matched—and weren't rags. And uncracked dishes that matched! And glasses that weren't jars. And books. And money. Crisp new-looking bills in the little box in the bottom drawer—pushed back under some *extra* pillow cases. And clothes—lots and lots of clothes. All too big for any of us, of course, but my practiced eye had already visualized this, that and the other cut down to dress us all like rich people.

I sighed as we sat wearily looking at one another. Imagine having so much and still looking for something else! It was bedtime and all we had for our pains were dirty hands and tired backs.

I scooted out to the bath house before I undressed. I gingerly washed the dirt off my hands under the cold of the shower and shook them dry on the way back to the house. Well, we had moved everything in the place, but nothing was what Mrs. Klevity looked for.

Back in the bedroom, I groped under the bed for my jammies and again had to lie flat and burrow under the bed for the tattered bag. Our moving around had wedged it back between two cardboard cartons. I squirmed under farther and tried to ease it out after shoving the two cartons a little farther apart. The bag tore, spilling out my jammies, so I grasped them in the bend of my elbow and started to back out.

Then the whole world seemed to explode into brightness that pulsed and dazzled, that splashed brilliance into my astonished eyes until I winced them shut to rest their seeing

and saw the dark inversions of the radiance behind my eyelids.

I forced my eyes open again and looked sideways so the edge of my seeing was all I used until I got more accustomed to the glory.

Between the two cartons was an opening like a window would be, but little, little, into a wonderland of things I could never tell. Colors that had no names. Feelings that made windy moonlight a puddle of dust. I felt tears burn out of my eyes and start down my cheeks, whether from brightness or wonder, I don't know. I blinked them away and looked again.

Someone was in the brightness, several someones. They were leaning out of the squareness, beckoning and calling—silver signals and silver sounds.

"Mrs. Klevity," I thought. "Something bright."

I took another good look at the shining people and the tree things that were like music bordering a road, and grass that was the song my evening grass hummed in the wind—a last, last look, and began to back out.

I scrambled to my feet, clutching my jammas. "Mrs. Klevity." She was still sitting at the table, as solid as a pile of bricks, the sketched face under the wild hair a sad, sad one.

"Yes, child." She hardly heard herself.

"Something bright . . ." I said.

Her heavy head lifted slowly, her blind face turned to me. "What, child?"

I felt my fingers bite into my jammas and the cords in my neck getting tight and my stomach clenching itself. "Something bright!" I thought I screamed. She didn't move. I grabbed her arm and dragged her off-balance in her chair. "Something bright!"

"Anna." She righted herself on the chair. "Don't be mean."

I grabbed the bedspread and yanked it up. The light sprayed out like a sprinkler on a lawn.

Then *she* screamed. She put both hands up to her heavy face and screamed, "Leolienn! It's here! Hurry, hurry!"

"Mr. Klevity isn't here," I said. "He hasn't got back."

"I can't go without him! Leolienn!"

"Leave a note!" I cried. "If you're there, you can make them come back again and I can show him the right place!" The upsurge had passed make-believe and everything was realer than real.

Then, quicker than I ever thought she could move, she got paper and a pencil. She was scribbling away at the table as I stood there holding the spread. So I dropped to my knees and then to my stomach and crawled under the bed again. I filled my eyes with the brightness and beauty and saw, beyond it, serenity and orderliness and—and uncluttered cleanness. The miniature landscape was like a stage setting for a fairy tale—so small, so small—so lovely.

And then Mrs. Klevity tugged at my ankle and I slid out, reluctantly, stretching my sight of the bright square until the falling of the spread broke it. Mrs. Klevity worked her way under the bed, her breath coming pantingly, her big, ungainly body inching along awkwardly.

She crawled and crawled and crawled until she should have come up short against the wall, and I knew she must be funneling down into the brightness, her face, head and shoulders, so small, so lovely, like her silvery voice. But the rest of her, still gross and ugly, like a butterfly trying to skin out of its cocoon.

Finally only her feet were sticking out from under the bed and they thrashed and waved and didn't go anywhere, so I got down on the floor and put my feet against hers and braced myself against the dresser and pushed. And pushed and pushed. Suddenly there was a going, a finishing, and my feet dropped to the floor.

There, almost under the bed, lay Mrs. Klevity's shabby old-lady black shoes, toes pointing away from each other. I picked them up in my hands, wanting, somehow, to cry. Her saggy lisle stockings were still in the shoes.

Slowly I pulled all of the clothes of Mrs. Klevity out from under the bed. They were held together by a thin skin, a sloughed-off leftover of Mrs. Klevity that only showed, gray and lifeless, where her bare hands and face would have been, and her dull gray filmed eyes.

I let it crumple to the floor and sat there, holding one of her old shoes in my hand.

The door rattled and it was gray, old, wrinkled Mr. Klevity.

"Hello, child," he said. "Where's my wife?"

"She's gone," I said, not looking at him. "She left you a note there on the table."

"Gone—?" He left the word stranded in mid-air as he read Mrs. Klevity's note.

The paper fluttered down. He yanked a dresser drawer open and snatched out spool-looking things, both hands full. Then he practically dived under the bed, his elbows thudding on the floor, to-hurt hard. And there was only a wiggle or two and *his* shoes slumped away from each other.

I pulled his cast-aside from under the bed and crawled under it myself. I saw the tiny picture frame—bright, bright, but so small.

I crept close to it, knowing I couldn't go in. I saw the tiny perfection of the road, the landscape, the people—the laughing people who crowded around the two new rejoicing figures—the two silvery, lovely young creatures who cried out in tiny voices as they danced. The girl-one threw a kiss outward before they all turned away and ran up the winding white road together.

The frame began to shrink, faster, faster, until it squeezed to a single bright bead and then blinked out.

All at once the house was empty and cold. The upsurge was gone. Nothing was real any more. All at once the faint ghost of the smell of eggs was frightening. All at once I whimpered, "My lunch money!"

I scrambled to my feet, tumbling Mrs. Klevity's clothes into a disconnected pile. I gathered up my jammies and leaned across the table to get my sweater. I saw my name on a piece of paper. I picked it up and read it.

Everything that is ours in this house now belongs to Anna-across-the-court, the little girl that's been staying with me at night.

Ahvlaree Klevity

I looked from the paper around the room. All for me? All for us? All this richness and wonder of good things? All this and the box in the bottom drawer, too? And a paper that said so, so that nobody could take them away from us.

A fluttering wonder filled my chest and I walked stiffly around the three rooms, visualizing everything without opening a drawer or door. I stood by the stove and looked at the frying pan hanging above it. I opened the cupboard door. The paper bag of eggs was on the shelf. I reached for it, looking back over my shoulder almost guiltily.

The wonder drained out of me with a gulp. I ran back over to the bed and yanked up the spread. I knelt and hammered on the edge of the bed with my clenched fists. Then I leaned my forehead on my tight hands and felt my knuckles bruise me. My hands went limply to my lap, my head drooping.

I got up slowly and took the paper from the table, bundled my jammas under my arm and got the eggs from the cupboard. I turned the lights out and left.

I felt tears wash down from my eyes as I stumbled across the familiar yard in the dark. I don't know why I was crying—unless it was because I was homesick for something bright that I knew I would never have, and because I knew I could never tell Mom what really happened.

Then the pale trail of light from our door caught me and I swept in on an astonished Mom, calling softly, because of the sleeping kids, "Mom! Mom! Guess what!"

Yes, I remember Mrs. Klevity because she had eggs for *breakfast! Every day!* That's *one* of the reasons I remember her.

IN THE HOUSE, ANOTHER

by Joseph Whitehill

from Fantasy and Science Fiction

I said somewhere earlier that this was the year for Other Creatures: extraterrestrials most of all, but by no means all. Again and again the underlying theme in the most thoughtful stories—be they careful science-fictional extrapolations, or the wildest flights of fantastic imaginings—is the daily more urgent need to learn the means and modes of communication with All Those Others.

What is an Other? We have had (besides a variety of e-t's) dopplegangers and gremlins, computers and communists, apes, ants, and A. Snowman (or woman), a telepath, a tribal chief, a Holy man, and the unclassifiable flora of Pogoland.

Now Mr. Whitehill, an engineer as well as an author ("The Angers of Spring," and "Able, Baker, and Others") offers a description with lab-report conciseness, accuracy, and attention to detail.

The Other had remained unseen in the house for hours. Hunching its dorsal structure and tilting its hairy skull sideways, it peered out into the dining room through the crack in the kitchen door. Its dark motionless eyes were fixed on the back of the man finishing his supper. Unaware of its presence, the man pushed back his chair, belched lightly, and stood up. The Other shuddered in disgust at the obscenity. The man stirred the boxer at his feet until it awoke and yawned with wet curled tongue, and stretched itself to its feet. The man took a scrap from his plate and tossed it to his dog, gathered his pipe and tobacco pouch from the sideboard, and, with the stiff walk of a full man, ambled out of sight into the living room. At his whistle, the dog followed. Though its neighborhood reputation was one

of vicious aggression toward strangers, the dog, too, seemed unaware of the presence of the Other in the house.

The Other remained in the kitchen, slumped in frustration against the refrigerator. Patience. There was time enough. No need yet to advance upon this man they called the Thinker. The Other crossed its freckled forepaws over its thorax, distorting the two spongy bags hanging there. This distortion was habitual, and went unmarked. The Other waited, its conchoidal hearing organs alert to the sounds from the living room. All were homely sounds; the thump of another log added to the fire . . . the ringing rapping of the Thinker's pipe on the metal ash tray . . . his sensual groan as he settled into the big deep chair before the fire . . . the scratching of the match and the spasmodic wheezy gurgling of the pipe as the Thinker drew it alive.

. . . Wait . . . wait. Not now. Later. Plenty of time. The Other sensed the first diffusion of the powerful tar esters of the tobacco smoke. Its sensitive olfactory neuro-termini rebelled, and its triangular proboscis twitched involuntarily.

The Thinker began to think. Mechanically, his hand sought out the dog's occiput, and he soothed both himself and the dog with his symbiotic scratching. *Required*, said his brain, *a stable amplifier capable of measurement of uni-potential electrostatic charges of minimal magnitude. For purposes of discussion, assume a design point of five micro-volt D.C. registration. . . .*

Twenty minutes passed. The dog had fallen asleep again, and the Thinker's pipe required relighting. He ignored it. *Direct amplification is out of the question, because random grid bias variation alone may reach five hundred microvolts.*

The Other moved quietly into the dining room, walking with a liquid lateral sway. It looked around the arched opening of the living room and gazed intently at the immobile form sunk in the chair. Dancing firelight played over his strong hard face, softening it almost to a boy's. The dog raised its head and looked at the Other, clinging there to the door jamb, then dropped his muzzle again between his forepaws. The Thinker did not stir. *Thus, a comparator must*

be devised which will convert applied D.C. potential into a proportional A.C. signal. . . .

An inchoate wave of hunger swept over the observing Other. Its red claws indented the soft wood of the door jamb, and in a somatic wrench of restraint, it turned and climbed the stairs. In its climbing it made a distinctly audible swishing sound, and under its weight a loose stair tread skirled loudly. In the living room, the sleeping dog's ear flicked at the sound of the squeaking board, but the Thinker thought on.

He was a skilled concentrator, with his brain an obedient assistant. His ears had heard the sounds of the moving Other, but their alerting message had been silenced at his thalamic switchboard. The ratiocination must not be intruded upon. *Currently available D.C. to A.C. converters are either synchronous switches or synchronously excited capacity diaphrams. . . .*

Upstairs, the Other moved wraithlike through the rooms, looking, touching, searching. It encountered a chair draped with the Thinker's soiled linen. It clawed among the linen in an aimless fashion, grasping pieces at random and elevating them to its eye level. It found a stocking and rammed its clawed forepaw into the opening all the way down to the toe, then held up the encased limb and swiveled it, looking at it from all sides with blank, unblinking eyes. It inspected a hole in the heel of the sock through which it could see its own skin color against the white of the sock. Enraged, it ripped off the sock, turning it inside out, and flung it onto the dresser. In futile irritation, it moved jerkily about the room, eyes flickering over the furniture and passing on. All these things around it were possessions of the Thinker downstairs. He had sat in each chair here, he had slept in that bed . . . his presence impinged on the Other's consciousness even up here where it had gone to lie in wait. He *must* come soon. This hunger could not be allayed so for long. It was becoming a crying, keening thing, imperious, and insatiable by such titillating hints of the real man, warm and soft, as lay all around it.

As if to torture itself, the Other swayed into the bathroom

and began examining the personal toilet articles of the Thinker. It held up a razor and tossed it idly in one paw. With its prehensile claws, it opened the shaving lotion and sniffed. It swirled the badger brush around in the wooden shaving bowl to see the lather rise. Why does he not come?

An hour passed. The winter night chill crept into the house, drawing tight the strands of tense silence.

Feedback of at least a hundred db will be required to stabilize the amplifier's A.C. gain characteristic. . . . The Thinker's pipe had burned down to a bitter dottle in the bottom of the bowl. The fitful firelight cast only occasional candle-bright glimpses of the room where he sat. The dog snored gently and stirred in its deep sleep. *Electromagnetic excitation of the moving diaphragm requires objectionably large quantities of A.C. fundamental energy. . . .*

At last the Other could wait no longer. It descended the stairs with haste and entered the living room. Its claw found the switch of the living room light, but it hesitated.

Its incarnadine labia gaped and it spoke.

"Dear, aren't you *ever* coming to bed?"

A SERIOUS SEARCH FOR WEIRD WORLDS

by Ray Bradbury

from *Life*

I do not know which was the most pleasantly startling: that this article was written by Ray Bradbury, genius of anti-science-fiction; that *Life* magazine devoted fourteen beautifully illustrated pages to it; or that the United States Government, in 1960, should have provided the basis for it.

In the shadows of a West Virginia valley, a Giant wakes—and listens. Owls sweeping the Green Bank wilderness see the Giant turn sleeplessly hour on hour, its vast 85-foot Ear cupped to the showering radiation of the Milky Way. Jabberings, cacklings and maniacal chitterings of electromagnetic star-talk bombard the Ear. Calmly the Ear feeds this static to tape machines and memory systems humming in its metal Brain nearby. Afflicted by ghost voices of lightnings which prowl far-traveling suns, the Ear, nursed by men, sleeps at dawn.

Does this sound like science fiction? Ten seconds from now will the Martian spider-kings invade, capture the Ear, and disintegrate the mad scientists who built it?

No. The Ear is a competently machined, absolutely real radio telescope finished in March 1959 at Green Bank, W. Va. The scientists of the National Radio Astronomy Observatory moving in its vast shadow are not mad. Their daring but dead-serious work is called Project Ozma.

Named for the princess of the faraway Land of Oz, the project began work on April 8, 1960. Periodically since then it has been searching for life on other worlds. Some fine evening the scientists of Ozma hope to hear a faint echo of humanity calling back down the vast slope of space.

Simultaneously, in nearby Sugar Grove, W. Va., the Navy is rearing an even greater beast out of mythology via technology. The Navy's electronic ear will stand half as high

as the Empire State Building. Its dish will stretch 600 feet from rim to rim. Cradled in two titanic Ferris wheel structures, the Sugar Grove ear will gather cosmic signals from 60 light years deep in space.

How many stars are there in the universe for our radio-telescope ears to listen to? Write the number 10. Then add 19 zeros after it. Of this unthinkable number, how many stars have planets rushing about them? A conservative estimate, says Harlow Shapley, Harvard professor emeritus of astronomy, is one in a thousand.

How many such one-in-a-thousand worlds will lie just the right distance from their suns so that a moderate temperature will encourage life? One in a thousand.

How many of these far fewer worlds will be large enough to bind and keep an atmosphere? One in a thousand.

And finally, how many of this vastly reduced number will have a proper atmosphere, with carbon, oxygen, hydrogen and nitrogen enough to stir up cellular life such as exists on Earth? Again, says Shapley, one in a thousand.

But with the number ruthlessly cut, we are still left with one hundred million planets in the universe on which some kind of life is not only possible but probable.

"It follows then," say Professors Giuseppe Cocconi and Philip Morrison of Cornell, "that near some star rather like the sun, there are civilizations with scientific interests and with technical possibilities much greater than those available to us.

"To the beings of such a society," they continue, writing in the British publication, *Nature*, "our sun must appear as a likely site for the evolution of a new society. . . . We shall assume that long ago they established a channel of communication that would one day become known to us, and that they look forward patiently to the answering signals from our sun which would make known to them that a new society has entered the community of intelligence."

Cocconi and Morrison were delighted when they learned that Dr. Frank D. Drake, director of Project Ozma at Green Bank, convinced of the same views, was putting the matter to a test.

As to whether Ozma will succeed and how long it might

take before we hear intelligent cosmic broadcasts, Professor Morrison says, "We are in the position of a man who has bought a lottery ticket, not knowing what kind of lottery it is. It may be a great international sweepstakes with odds of 10 million to one against anyone winning. Or it may be a neighborhood raffle where chances of winning are high. I hope that Dr. Drake's experiment may succeed shortly, but it may go on for generations before success or abandonment."

Intergalactic party lines may have been established ages ago, Dr. Drake believes. Professors Morrison and Cocconi agree. Civilizations in space may have contacted each other with strong, directed radio beams and formed a club talking back and forth. Consequently, the better the club, the more members are in it. So each member looks around for stars with worlds having indications of advanced technology. When they see a promising star, they cast their beam toward it. It is like waving a flashlight. They have been waving it for thousands of years.

The disquieting thought arises, however, that if politicians in other universes are like our own home-grown variety, little or no waving of flashlights would be done on such an unproductive basis. Unless assured of economic or technological gains, it is hard to imagine a government on Earth, Mars or one of Alpha Centauri's planets handing over funds for what could be the most expensive wrong number ever dialed. For that matter, is there any reason to think that beings on far worlds would be able to invent and perfect such a thing as radio?

"In our view," says Professor Morrison, "life on most planets would be maintained by light from its neighboring star, just as Earth life is maintained by light from our star, the sun. Therefore, any scientific civilization would certainly seek to understand the nature of light which is the basis of their life. Once you understand the nature of light, you are led to the whole electromagnetic spectrum of which radio is a necessary part."

How do we tune in on other worlds? How do we know the right "station" to fix our attention on? After much study, Project Ozma has picked a listening frequency of 21 centi-

meters (1420 megacycles). This frequency was chosen to cut down on natural interference. The air surrounding planets like Earth cannot be penetrated successfully by signals above 10,000 megacycles. Below 1,000 megacycles, on the other hand, the static from galactic space is too loud. Faced with atmospheric noise on one hand and radio gibberish on the other, the Ozma scientists compromised on the 21-centimeter frequency. They chose it for another reason as well: it is the natural vibration most commonly heard on our radio telescopes, the vibration of neutral hydrogen that we get when we study giant hydrogen clouds in the sky.

Neutral hydrogen, we know then, is richly strewn throughout the universe. Other radio-advanced worlds cannot help but note this same truth. Guessing that we will have already tuned in on this natural intergalactic wave-length, intelligent beings on other worlds may be expected to do a most sensible thing: they will probably broadcast at a frequency close to that of the neutral hydrogen band, just as small U.S. radio stations sometimes sneak over and rub shoulders with big-brother radio-station bands in order to pick up stray listeners. So our Ozma scientists, listening to the moronic outbursts of neutral hydrogen, will test both sides of its narrow band, hoping for sounds more intelligent.

By spectroscopic study of starlight, we have decided that seven stars exist within 15 light years of us which have a luminosity and lifetime like that of our own sun. These seven stars are old enough to have given birth to planets from which radio broadcasts could be expected. The stars are: Tau Ceti, Omicron-Two Eridani, Epsilon Eridani, Epsilon Indi, Alpha Centauri, 70 Ophiuchi and 61 Cygni.

Ozma will record all the radio whispers it gets from these most promising star systems and look for some pattern hidden in the whispers. Any sounds repeated, in sequence, would draw our attention. If we heard, for instance, three dots, seven dots, three dots, seven dots, over and over, again and again, we would be alerted immediately.

"Naturally," Professor Morrison points out, "there is no chance whatever of a common language existing between the broadcasters on separate worlds. But it is easy to see how a common language could be built up during a long period

of communication. Starting with a simple arithmetical relations, using our radio pulses as numbers, we could communicate all the symbols for algebra to another world."

With the algebraical relations established, Morrison believes, it would be a short step to drawing figures geometrically. At our end of the party line we might try translating the pulses we receive into a picture suggested by the mathematics. Once we find a way to make the diagram visible, we will know how to interpret any picture. Through these pictures, traded between worlds like do-it-yourself numbered painting kits, much information could be transferred and even compact languages taught by cross-galactic radio.

The entire process might last out the lives of generations of scientists. If, for example, we heard a recognizable code from Tau Ceti tonight and broadcast our own welcoming salute back at it, it would take our message 11 years, traveling 186,000 miles per second, the speed of light, to reach our possible friends. If they, in turn, heard *our* first broadcast and wired us congratulations at joining the network, another 11 years would pass before their good wishes hit our radio telescopes. So it would take until 1982 for us just to say "hello" to each other. It would be 2004 before we asked after each other's health. By 2026, only a few groping, exploratory words or sentences might have been traded.

We would have to wait until the middle of the 21st Century before anything resembling a page of the simplest pictures might change hands. Meantime, death will have harvested and life reseeded both scientific ends of the fantastic long-distance call.

Not that we will wait that long for our first grunts and stutters to clarify themselves. Once we are sure that a specific star system contains intelligent life, we will probably shoot out vast quantities of information about ourselves on various frequencies, utilizing various codes. This information, though unrecognizable, might be recorded by the scientists on another world, to be translated after they solved our code. They might use the same bombardment of information on us, thus saving vast quantities of time once the new interplanetary language is learned.

Once a language is finally established, what will we talk

about? Most important, of course, may be the bartering of scientific fact. Technological know-how radioed from Omicron-Two may help us swarm our rockets up in great locust flights across the universe, thousands of years earlier than now expected.

Nostrums for the common cold may be prescribed for us by doctors who may themselves be long dead before their cure reaches Earth. Psychological information, culled by creatures beyond imagining, may be signaled to us. Much of it may be dross, but some of it might contribute to our own fast-growing self-awareness. And ultimately, who can say? A cure may be offered for that most ancient and terrible of our sicknesses: war.

But surprisingly, the first intelligent sounds we hear from far Epsilon Indi may not be code or pulsing signal at all, but rather some Epsilon Indi music that was broadcast, as is ours, to the heedless winds of space. We would not know it as music at first, just as when we hear the Oriental tone-scale it falls strangely on the ear. Yet, with persistent listenings, our first brush with alien minds across the darkness may be the filtering in of a symphony composed by a Beethoven raised in the starshine of 61 Cygni.

But, man being what he is, electronic ears and signals and symphonies will not suffice. We will want to go and see for ourselves. We will not, however, send our first unmanned rockets to one of the seven promising star systems. Instead, the rockets will fire out through our own solar system, among those very planets which we have half neglected with our radio telescopes, simply because they do not appear to offer hope for our kind of life.

Our first robot machines will probably set down on the red planet Mars. From within this knowledgeable rocket, valves and snouts will thrust to suck ore samples into bins deep in the ship. Other airlocks will feed endless rolling tapes of that gelatinous standby of the biologists, the sticky nutrient agar, through the Martian air and back into a laboratory. There, under automatic TV and camera equipment, a historical event will occur: mankind, by remote control, will meet his first Martian—a bacterium jittering under a microscope.

Dr. Joshua Lederberg, at the Stanford University School of Medicine, who suggested the agar-tape equipment, has warned that we must build devices to decontaminate our rockets coming home from Mars. Science fiction is filled with tales of Martians invading Earth. It would be a terrible irony if some alien bacteria, carried back in a robot ship, conquered Earth through our lungs and blood stream.

Having met and been disappointed by our first Martian, the bacterium, what other life forms can we look for? Vegetation, says Clyde W. Tombaugh, one of the nation's leading astronomers, now working in Las Cruces, N. M. Tombaugh believes the seasonal darkening of Mars's so-called canals is probably caused by lichens which survive extreme heat, cold and lack of water. The canals themselves are "deep fissures of fractured land caused by asteroid impacts."

Varieties of vegetable life and the higher levels of animal life would be missing, says Tombaugh, because there is so little water. He adds: "Certain favored places on Mars, in the summer months, would have temperatures as high as 70°F., but the temperature drops to 30 or 40 below zero every night of the year at the Martian equator. In the antarctic night, the temperature must go some 200 below zero."

So much for Mars, tomorrow morning.

But a half million years ago, when Earth's half-apes gamboled in an eternal nightmare spring, did civilizations rear temples, forums and ocean cities across Mars? Have those peoples gone to dust, or perhaps burrowed underground to escape the bitter weather?

Krafft Ehrlicke, a top space researcher at Convair Astronautics in San Diego, very much doubts it. He believes that any planet originally able to clothe itself in oxygen and to rain down turbulent oceans of water would almost certainly be able to keep those elements in vast supply over geological leaps of time.

Nevertheless, Mars may well shock us from our provincial views. We must remember that here on Earth some germs thrive in purest sulphur, microbes generate in boiling Yellowstone springs. At Los Alamos our water-immersed nuclear reactors are often clouded by the micro-organism called *Pseudomonas* which survives radiation dosages 10,000

times stronger than those needed to kill a man. Similarly Mars, in its harsh natural laboratory, may have evolved fantastic chemical cycles that produce life forms heretofore unguessed.

All facts considered, however, our scientists may well turn to a more mysterious greenhouse world nearby. The surface of Venus, shrouded in mist, has never been seen. Some authorities still believe that this shroud results from titanic hurricanes of dust roaring over a bleak desert world. But recent Naval balloon-ascension observations have found the first traces of water vapor in Venus' atmosphere, reviving the old theory that Venus is covered with water. The problem of landing on Venus then may be complicated by the discovery of an ocean that runs forever with no shore.

Given this single vast medium, the same elemental seas that we Earthmen carry as remembrances in our saline blood, it is reasonable to believe that with generation bringing forth generation for three billion years, fish kingdoms not unlike the societies of ant and bee might have developed in the Venusian depths. Unfortunately, the 50-foot radio telescope at the Naval Research Laboratory has found that radiation from Venus indicates a surface temperature of about 540°F. From this we can imagine millions of tons of water boiling up in oceanic storms to condense and fall in scalding rain.

"If this is true," says Clyde Tombaugh, "Venus is not only a hidden planet. It may be a forbidden planet for manned exploration."

Drownings and scaldings on one world, freezings and asphyxiations on another. Has our family of planets nothing better to offer us? Mercury, nearest the sun, has her noon side melting in 725°F. blast-furnaceings, her midnight side struck dead by utter cold. Jupiter, ten times larger than Earth and 317 times heavier, lies stunned beneath a hydrogen atmosphere 6,000 miles deep, an ice layer 13,000 miles thick. This dismal world would crush our rocket like tinfoil with an atmospheric pressure one million times greater than our own. Saturn, Neptune, Uranus, Pluto: the farther out the colder, darker, more desolate, as the story of life grinds to a halt.

Spurned by Mars, dusted off Venus, mashed by the gravities of Jupiter and Saturn, we will set our course for the stars.

Actually, no one man can live long enough to survive the journey from Earth to even the nearest star. Traveling far more slowly than the speed of light, even our fastest rockets may take hundreds of years to reach a single target. Yet once the journey becomes feasible, man will not be able to resist it. The nearest star being a lifetime or more away, we will have to prepare for a trip in which families will bridge the billion-mile gap with leaps of children, grandchildren and great-grandchildren. The abyss will know the burials of astronauts dead and jettisoned while their sons' sons move on.

Unless we have a radio response to guide us, where will we go? By the time our star-ships are ready, we will have established great telescopes on our moon and on Mars. There, with atmospheric interference cut to zero and with visual clarity at its finest, we may be able for the first time to see families of planets obedient to distant suns. We will look for a planet revolving about a sun that looks old enough to have given its worlds time to rouse up life. We will try to detect a world like ours, whose atmosphere in the beginning was largely methane, ammonia, water vapor and hydrogen. That primitive world would have been needled with prehistoric lightnings and bombarded by a younger, more violent life-provoking sunlight.

We will look for a world which did the following for itself: 1) collected a thin sheath of water over at least a part of its surface; 2) for a billion or more years stirred this water into a broth of chemicals; 3) after untold trillions of fruitless combinations brought forth exactly the right complex of compounds, rich in proteins, needed to make up protoplasm; 4) somehow, in a way still not understood, built into this protoplasm the characteristic of self-reproduction that made it a living cell.

We will have to judge from a great distance whether a planet is too far out or too near its sun. A planet as close to the sun as we are should revolve at a good pace on its axis in a time corresponding to our 24-hour day. A planet

turning more slowly would have higher temperatures dangerous to budding life forms. Also the cosmic rays that penetrate its atmospheric shell should not be too strong or too weak. If too strong, annihilation of life would follow. If too weak, the chemistry of the world would not be encouraged to put forth those remembrance-molecules we call life.

But let us say we calculate correctly, cross the galaxy and step from our rocket onto a sunlit world the incredible duplicate of Earth. Who, or what, will be there to greet us? Will it look human? Or will we be confronted by science-fictional creatures with multi-faceted housefly eyes and snakelike arms? Let us start with mankind and work down.

The alien creature at our rocket door might have eyes, ears, nose and mouth, might even have a skeleton on top of which would sit that appendage called "head" in which it would locate, through successive biological experiments, its main sensing organs.

How can we dare imagine life like ourselves on another world, when even on Earth we find millions of creatures totally different?

"The problem is," says Krafft Ehricke, "we do not even know what caused man's differentiation from the primates. One thing is sure, however: we are constructed intelligently. If your eyes were on your knees or elbows and your brain remained where it is now, it would take 20 or 30 times as long for the brain to learn that a rock, say, was flying toward you. By the time the message traveled the long way from eye to mind, you'd be dead. You'd never know what hit you. It is therefore very functional for the eyes to be near the brain. The same goes for the ears and practically all our senses, as far as preliminary warning is concerned. One would assume that any higher intelligence on another world would need its sight, sound and smell located near its brain.

"Secondly," Ehricke continues, "assuming a gravitation similar to ours, you must assume the need for a basic frame, a bone structure. It would not necessarily look like ours, but it has to be there. If this life form operates on oxygen or some other chemical system which uses gaseous intake, there would have to be certain conversion systems in the

body such as our lungs and heart. For protection, these organs must be placed where the bone structure would serve them best—within the frame or otherwise shielded by bones. If our vital organs were located without protection in any of our limbs, accident might lop them off entirely.”

The history of other worlds then is roughly the same as that of our own world: a competition between life forms, some able to win through, some unable to do so through bad placement of organs. The extinct billions of experiments that failed are not around for us to examine. Life, structuring itself for more efficient survival, remains.

To further illustrate his point, Ehricke cites airplane design in the early 1900s: “Fantastic varieties emerged from many countries, all experimental, all different. But today by natural selection, there is only one optimum type of aircraft for certain speeds. So if conditions on other worlds are similar to ours, their creatures could show some physical resemblance to us.”

This allowed, we have no way of guessing what variations in mankind itself could make a more efficient creature with greater survival characteristics. A third eye in the back of our heads, for instance, would be a lifesaver in this age of the galloping pedestrian. On a world where the air is thick, the beings would need extremely small mouths and nostrils to cut down on intake. If the air is thin, they would need mouths and nose vents like barn doors.

To the lonely space man, an alien woman with the above features would hardly be attractive. Right here, the entire field of esthetics looms before us. Astronautical history may depend on those concepts of beauty and utility our men take along as unacknowledged cargo to the stars. Countless books will have to be written under the general title: *Esthetics and Etiquette for Other Worlds*. Otherwise we are in danger of mistaking a rough skin for a rough mind, a third eye for an evil eye, a cold hand for a cold and hostile heart.

We have our own history of Indian-white relations to look back on with dismay. But these were, though savages, men. Confronted with beings resembling cockroaches, will we pause to consider whether their I.Q. is 50 or 250? Or will we simply build the grandest shoe in history and step on them?

Our first astronauts then must be the wisest and most temperate men, slow to revulsion, quick to sympathy, capable even of having their concepts of male-female sexuality shaken. On the planets of Tau Ceti sexes may be combined in one body or, worse from our lusty view, may be lacking altogether because more efficient if less invigorating ways have been found by nature to keep a race going.

Thus far we have dealt with planets enjoying climates as bright and fine as ours. But even on such worlds, spendthrift creation is almost certain never to repeat an accident in the same way. Man, ape on the way to being angel, is but one of a trillion happenstances, neither better nor worse than trillions of others thrown up for grabs in island universes we will never see.

So while we may find cities on other worlds, they will not look like cities, the houses not quite houses, and the furniture and art all a little wrong to our jaundiced eyes. We will watch games that seem hardly games, hear songs just barely songs, all on worlds exactly like ours in natural environment.

But what of planets swinging about redder or whiter suns than ours, covered with lethal atmospheres where we will move like deep-sea divers in our space suits?

Earth life is based on carbon and oxygen. Does it have to be, on other worlds? No. Here are some other possibilities:

A world where the air is a hydrogen-peroxide vapor. This vapor, breathed in by animals, could be broken down into oxygen and water for use by their bodies.

A world where fluorine might be inhaled as a gas by living creatures. The skin of fluorine-breathers, however, would be leathery and unpleasant and the world itself so nightmarish that our space men probably would not stay more than an hour.

But in the creation of life the atmosphere of planets is less important than the kind of warm-broth seas that covered them in their formative years. We men are built largely of carbon which, billions of years ago, formed the basis of increasingly complicated chemical compounds that changed and changed again until at last they came alive.

We carbon creatures are prejudiced in our own favor be-

cause, in all truth, carbon life can survive environmental dangers that other noncarbon forms could not possibly stand. So versatile is it, in fact, that if ever carbon life and silicon life came into existence simultaneously, carbon life would wipe out the silicon life. So versatile is carbon that out scientists long ago divided their studies into organic (carbon) chemistry and inorganic chemistry. Carbon, a virtuoso performer, can do more tricks than the whole theater of all the other known chemical elements. Silicon is the only other element that approaches it. Can we then expect to find silicon life in the universe?

There is one serious flaw in imagining silicon creatures. We breathe out carbon dioxide, which is a gas. "Silicon creatures," says Dr. Tombaugh, "would breath out silicon dioxide, which is quartz."

It is hard to imagine an animal exhaling crystals of quartz as it moves through its world. Silicon life would need to breathe something like flourine. This would cause it to exhale silicon-tetra-fluoride, after using the liberated energy. This, too, would result in a creature far removed, if even faintly resembling, ourselves.

What we have guessed so far is unpromising, unsettling, sometimes terrifying. How nice it would be to step off our rocket on some far world and find just home folks like us.

It could happen.

Thomas Gold of Cornell's space research group believes Earth may have been visited by cosmic neighbors a billion years ago. Finding the climate not to their taste, they dumped their picnic trash and left. From this discarded lot, bacterial life in its own good billion-year time evolved up to present-day man. We, too, some year, may seed other worlds with Coke bottles, paper napkins and orange peels from which *our* germs, invisibly stamped with our images, might rise up and walk on legs a billion years hence. So the creatures of the universe, through an intergalactic untidiness, might summon forth twins a thousand million sunrises apart.

Improbable. But improbable, too, is the thought that spores, drifting down the star winds, may have carried life

from other nebulae to ours. Or the thought that perhaps huge meteoroids, shot across the abyss, carried out the work. Yet there is evidence that this may have happened. Dr. Melvin Calvin of the University of California at Berkeley has discovered recently, in examining meteor bodies, molecules resembling the basic stuff of genetic material here on Earth. In these blazing gifts from space he found prebiological forms that have not been on Earth for millions of years. These chemical combinations were the very ones that had to occur before life could stir.

In the scientific laboratories experts are experimenting with the creation of life in a test tube. In an artificial recreation of our raw and nightmarish environment when lightnings prowled our world like unchained beasts, Scientist Stanley L. Miller subjected a mixture of methane, or marsh gas, hydrogen, ammonia and water to electrical discharge. The result was the production of amino acids. Biochemist Sidney W. Fox, of Florida State University, has carried the process one significant step further: from the amino acids he has produced substances resembling proteins which then form tiny spheres which look like—and in some ways act like—bacteria.

Life in a test tube: a mystery.

Life on Earth: a mystery.

Life on other worlds: a mystery.

The mysteries move closer together through the immense shuttling of our thoughts, our laboratory devices, our far-traveling rockets.

The dust which once flew in the voids, the stuff of the sun, the mineral trash of Earth, has reared itself up in our time to become man—to speak in tongues, to put forth hands and, with one of its billion-year-developed senses, to see those beckoning stars. That dust which came down through cycles of destruction and rebirth now desires to seek other dusts, to know what further shapes strange suns and gravities may have given them.

In our time this search will eventually change our laws, our religions, our philosophies, our arts, our recreations, as well as our sciences. Space, the mirror, waits for life to come look for itself there.

ED LEAR WASN'T SO CRAZY!

by Hilbert Schenck, Jr.

from Fantasy and Science Fiction

The owl and the pussycat went into space
In a modified Jupiter C.

They took some lox, and standard clocks
And an ape with a Ph.D.

The owl took a sight on the stars above,
And sang to the guide beam's sound,

"Oh lovely pussy, oh pussy my love,
We should never have left the ground,

The ground,

The ground!

We should never have left the ground."

Pussy said to the owl, "Our atmosphere's foul,
And your singing's upsetting our course.

But let us be wedded and compute where we're headed,
We will send our decision in Morse."

So they rocketed gay, the elliptical way,
To the land where the fungus grows.

And there, as he should, a Martian stood,
On a ring instead of his toes,

His toes,

His toes,

On a ring instead of his toes.

"Will you loan us your ring, if the owl doesn't sing?"

Telepathed back the Martian, "I will."

So they dragged it away, and were married next day,
By some sort of a thing with a gill.

They dined on yams and boneless hams,
While the Martians espied them in mirth.

And hand in hand on the ruddy sand,
Each thumb'd his nose at the earth,

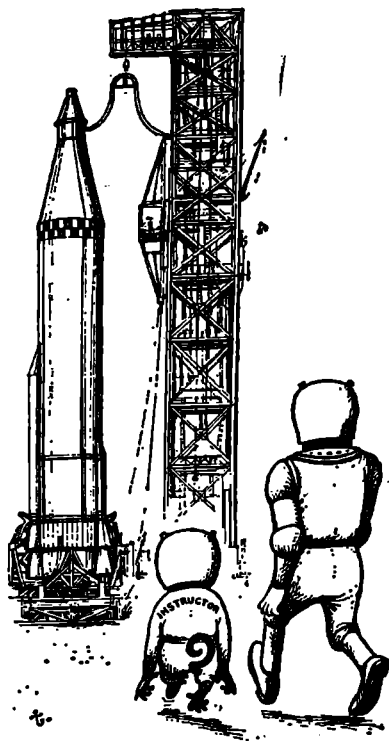
The earth,

The earth,

Each thumb'd his nose at the earth.

INSTRUCTOR

by Thelwell
from *Punch*



THE BROTHERHOOD OF KEEPERS

by Dean McLaughlin

from *Astounding Science Fact & Fiction*

Dean McLaughlin is a quiet, self-contained young man who works full time in a college bookstore, and in his spare time turns out, too infrequently, thoughtful and thought-provoking stories, mostly for *Analog* (*Astounding*).

He says that "half of the idea" for this story originated with his father (the Ann Arbor astronomer of the same name): "Xi Scorpii is a genuine bona fide binary star, roughly 80 light-years from here (and Lambda Serpentis would make a very good way-station stop en route). The twin stars actually could play catch with a planet as described in the story.

"The other half of the story's genesis was some remarks in Loren Eiseley's essay, 'The Fire Apes,' with which I didn't entirely agree...."

PROLOGUE

The cold wind screamed and drove dart-chips of crystal stuff deep into Chier-cuala's fur.

Chier-cuala struggled up the hill. It was hard going. His walking flippers couldn't find good footing in the white, soft powder that smothered the land, and the slope was steep. His stubby legs ached with fatigue. He floundered and wallowed in the white powder. It was cold.

He couldn't remember any cold time like this one. Never had it been so cold. Never had the wind blown so hard—so endlessly. It had not stopped for many sleeping times. And never had the strange white powder lain so thick on the ground.

Chier-cuala couldn't understand.

The cold, hard darts of crystal stuff clung to his fur. He brushed them away. The wind plastered more against him.

The wind leaked through his thick pelt and chilled him. His walking flippers ached and throbbed with the cold. He whimpered softly.

Stubbornly, he pressed on toward the crest of the hill. He needed food. His hunger was a compelling agony. It was the only thing that could have driven him out into this cold and wind. Always before, when a cold time came, he had huddled in his lair until it stopped—until the sky was blue again, and the powderlike white stuff on the ground turned to wetness, and the air turned warm.

But this time the cold had not stopped, and the wind still blew, and the sky remained gray. He had not eaten since . . .

He remembered the last thing he ate—the small, clumsy creature he had caught in the recesses of his lair. It was so small he would have ignored it, except he was starved.

And after he ate it, he had slept through a dark time, and then there was a bright time during which he did not eat because there was nothing, and then another dark time through which his sleep was troubled by visions of edible creatures.

Now, forced out of his lair by his hunger, he climbed the hill. The odd creatures on the hilltop had given him good things to eat, sometimes, when he did things which they made him understand they wanted him to do. Purposeless things, and some of them were very hard, but the odd creatures gave him good things to eat when he did them.

The slope was covered with the cold, white powder, and the broken-off stems and stalks of what had been a forest stuck up nakedly. Shattered pieces of them, buried under the white powder, slashed his walking flippers and blue stains marked his path.

Chier-cuala tried to pull himself up the steep slope by grasping the upright stalks in his prehensile, paddlelike forepaws. The stalks broke. He fell back—rolled downhill in a whirl of the white powder. It got into his fur. It was wet and cold.

He lay where he stopped rolling. He whimpered, too weary to move. Finally, knowing he must move and making the effort, he struggled up and went on. He did not try to grasp the stalks again.

At last, he found a way to the hilltop. The wind blew more fiercely up there. It slashed through his fur and chilled his body. He cried softly, miserably. His walking flippers were full of pain—turning numb. The blue stains in his footprints grew large. Clumsily, he stumbled across the hilltop toward the place of the odd creatures.

He whacked a forepaw against the flat thing that blocked the entrance. It did not move. He slapped again, and then again and again, harder and harder. He uttered a broken, heart-forsaken cry. He could not understand why the odd creatures did not take away the entrance-block and give him food.

He had to have food. He was hungry.

The cold wind screamed.

Chier-cuala slapped the door and sobbed.

1

They called it coffee, even though it was brewed from the stems of a plant which originated forty light-years from Earth. It had a citric, quininelike taste. Hot and sweetened, it served the same function as coffee. Some people even preferred it.

It was an odd hour; Sigurd Muller and Loren Estanzio were alone in the commissary. Muller sipped from his cup—it was too hot yet. He set it down.

"What do you think about it?" he asked the younger man.

Estanzio made an awkward, unconvincing shrug. "It sort of scares me," he admitted.

"Yeah?" Muller leaned his weight on the table. "Why?"

The young man was embarrassed. "Well," he explained, "you remember last year, just after I got here, you put me through the test sequence—the same one you use on the floppers?"

Muller smiled. "I put all you young squirts through it. You're supposed to be smart, or you wouldn't get to come here. It's a good calibration standard."

Estanzio nodded. "I didn't do so good," he said.

"You did average," Muller recalled, as if it was an unimportant matter. He tapped a fingernail on the table top.

"The trick with an intelligence test, you've got to make it tougher than the smartest guy to take it. Otherwise, it's a no-good test." He slouched back and half closed his eyes. "In the seven years I've been here, the average intelligence of the scientist-candidates that come here hasn't gone up an inch. I guess you kids have reached an evolutionary plateau."

"That's the thing that scares me," Estanzio confessed. "I mean, I knew all about mazes and problems, but the set you've got had me stopped. And when I saw that flopper catch on to the pattern maze—when it didn't even know the principle of a maze . . ." He hesitated. "I'm scared," he repeated lamely.

"It was a smart one, all right," Muller said.

Estanzio wasn't ready to go quite that far. "It could have been a fluke," he suggested.

Muller shook his head. "No fluke," he said. He leaned closer. "What if I told you the one we had today wasn't the first?"

Estanzio frowned. "I hadn't heard of any others," he said doubtfully. "And I know there haven't been any since I've been here."

"You've just been here a year," Muller reminded him. "I had two the year before you came. They both came from the same place—the same place this one came from."

"Ziggurat Mountain?"

"Yeah," Muller said. "An enclave shut up in the mountains with no way out and a population of about seven and a half thousand. It used to be six thousand—it's been going up the last ten years."

Estanzio thought about that for a while. Idly, he turned the handle of his coffee cup one way, then the other. "Just the sort of place we could expect it," he said finally.

Muller nodded, smiling. "Now tell me why."

"Well, it's a small population in a limited area—isolated—and they're under extreme selection pressure. It's the sort of situation that's almost sure to show an evolutionary trend."

"You got that out of Houterman's book," Muller said.

Estanzio flushed. "Sure. But he's right, isn't he?"

Muller shrugged. "It's the same basic principle," he

agreed. "But he wasn't talking about the setup here. He was talking about evolution by genetic drift—where the genes already exist. That's not what's happening here."

"Are you sure?" Estanzio asked hesitantly.

"Yeah," Muller stated. "We've had this station here ever since the planet switched from Alpha to Beta—that's close to a thousand years. We've been testing floppers all that time. If the genes had been around back then, they'd've shown up in the first couple of centuries. They didn't. The first flopper that showed up even halfway intelligent—don't scowl like that, I've checked the records—was just forty years ago. And guess where he came from."

"Ziggurat Mountain?" Estanzio guessed.

Muller rapped a fist on the table. "Right," he said through his teeth. "It's a mutation. It's got to be. And it happened right there in the enclave."

Estanzio was silent a moment. "Why did you kill it?" he asked.

"Same reason I killed the other two," Muller said. "I want a look at its brain. The first two—I thought they were flukes. Now I don't think so—and a look at this one's brain cells will prove it."

"But wasn't that against the rules?" Estanzio wondered. "I mean, a flopper showing exceptional characteristics. . . ."

Muller scratched his satanic beard. "So it was against the rules," he said contemptuously. "I had to find out, and that's the only way."

Abruptly, then, he changed the subject—or seemed to. "You go back with the supply ship, don't you?"

It wasn't really much of a question. Only a very unusual scientist-candidate stayed more than one year. Estanzio nodded.

Muller smiled, satisfied. "O.K.," he said. "When you get back, you can talk about this all you want. But while you're still here . . . it didn't happen. None of it. Understand?"

"I . . . I think so," Estanzio said slowly. "But . . . why?"

"Because they're getting smart," Muller told him. "If we don't do something, they'll all get smart—smarter than we are. And they're vicious—you've seen what the wild

ones are like. Well, we can't let it happen. That's why we've had this station here all these years—to watch 'em, because someone way back then figured this might happen. So we can stop 'em if it does. But there's just enough softheads around here that *want* it to happen. We don't want them finding out—or anybody else."

"Oh," Estanzio said. He frowned helplessly. "But what can we do? How can we stop them?"

"Don't ask," Muller chuckled. "I might tell you."

"Well, I'd like to know," Estanzio said.

Muller leaned his weight on the table. He tapped the hard surface confidentially. "You heard who's coming in the supply ship this time?"

Estanzio paused, trying to remember. "Well, there's Blackett, and Holman, and . . ."

Muller waved a hand. "I don't mean personnel. I mean just for a look around."

"Hitchcock?" Estanzio wondered incredulously. "But he's . . . He'd be on *their* side. He always is."

"He might be," Muller admitted, "if he knew what he was doing. Most of the time, he just meddles. That's what he's going to do here."

"Are you sure?"

"Yeah. I'm sure," Muller said, smiling. "I'm going to help him." He laughed.

"I was horrified, gentlemen. Horrified."

That, Adam Hitchcock decided, was the thing to say about Xi Scorprii when he got back to Earth. That was what he would tell his Society for Humane Practices, to signal the beginning of a new crusade.

The Xi Scorprii Foundation would protest, of course. They would say he was misrepresenting the facts. But that didn't worry him. Men always said that when he exposed their iniquities, and it never made the slightest difference. The public always recognized the truth.

Hitchcock made his decision as soon as he arrived at Xi Scorprii—while he was still descending the stairway scaffold that huddled close up against the *Wayfarer's* flank. His mood was surly—it had been a bad trip out. The *Way-*

farer was a cargo ship, with only minimal provision for passengers; he had been obliged to share his cabin with a young scientist-candidate whose single-minded enthusiasm for the mutational aspects of genetic chemistry left him with a very unflattering picture of the scientific mind.

Carrying a piece of luggage in each hand, Hitchcock trudged down the stairs. It was a long way down, and the scaffold felt rickety. It trembled and creaked in the wind.

Any civilized place would have had an elevator.

The wind was cold. It howled around him. It chilled his throat. It penetrated through the thin overcoat he wore—a coat which was all he'd have needed on any civilized planet. His ash-gray hair was tangled. His ears tingled painfully. His jowls were numb. His head ached and his nostrils watered. It was a dreadful planet.

He paused on the stairway and set down his bags. He tried to draw his collar tight. It was no use—the cold air continued to ooze through. Grimly, he stared down again. The camera looped over his shoulder bumped his side.

The landing field toward which he descended would not have done justice to a survey camp. It was nothing but a leveled-off rock plain without pavement, no larger than a city block. Various atmosphere craft crowded the edge of the field on the side nearest the outpost's black dome. On the other side, a cold sea spread all the way to the edge of the sky. Sluggish, floe-choked waves smashed on the rocks, building castles of ice with their spray.

Critically, Hitchcock glanced toward the bright sun. It burned in a blue, clear sky, but it gave no warmth. Nor was the system's other star more than a fleck of light down close to the ice-dappled sea.

Definitely, this planet wasn't fit for anything to live on—neither man nor any other creature.

Already, he saw as he continued his descent, the ship was disgorging its cargo. Its hoist settled massive crates and bundles of supplies on sledges which were dragged toward the dome by harnessed teams of shaggy, dirty-white, short-legged creatures about the size of very large dogs. At rest, while waiting for their sleds to be loaded, they squatted on their hind legs, their apparently boneless arms curled up

almost double and their mittenlike paws pressed flat against their bodies. No one was directing them. They seemed to know what to do.

Halfway down the scaffold, Hitchcock stopped again. He turned to the man behind him and pointed at the laboring creatures. "Are those the natives?" he asked. He had to shout to be heard above the howl of the wind.

The man—another of those eager young scientist-candidates—didn't seem to understand the question. "The floppers?" he wondered uncertainly, then nodded.

Hitchcock unlimbered his camera and put the scene on tape. It was an outrage! The poor things were slaves!

When he reached the bottom, a man in a thick, hooded garment was waiting beside a sled with removable benches set on it. Its eight-flopper team squatted stoically, cringing from the frigid wind. The man reached out to take Hitchcock's luggage. "Climb aboard," he invited loudly. "We'll be heading for the dome in a minute, as soon as the rest of you get down."

Hitchcock didn't let go of his bags. He glanced at the harnessed floppers. "Thank you," he said stiffly—and his teeth rattled with the cold. "I prefer to walk."

The man shrugged, but he looked concerned. "It's a long way to hike in this wind," he advised, nodding toward the dome a half mile away. "The first thing you know, you've took a deep breath, and then you've got frost in your lungs. Better ride along with the rest of us peasants."

"If they have to pull me, I will not ride," Hitchcock insisted staunchly.

"Who—the floppers?" the man wondered incredulously. "They grew up in this weather. They eat it for breakfast."

"They didn't grow up to be slaves," Hitchcock retorted.

The man looked at him queerly. "You must be this Hitchcock we heard about," he said. "Listen, mister—somewhere you've got the idea these floppers are people. They're not. They're just smart animals."

"No creature in the universe was ever born to be a slave," Hitchcock intoned.

The man made an exasperated noise. "Just take my word

for it. If you walk, you'll wish you hadn't. Now climb aboard. We're ready to move."

He jerked an imperative thumb at the sled. Hitchcock eyed him for a long, stubborn moment.

Then the cold and the wind persuaded him. He went to the rear of the sled and put his baggage in the rack, all the time stamping his feet to put warmth in them. His hands were numb and blue. Shivering, he told himself the creatures could endure the climate better than himself, and that they would drag the sled whether he rode it or not. He would not add much to their burden.

But he hadn't forgotten his mission. He raised his camera and taped the scene—first the sled and its load of huddled, windlashed passengers—then swung the lens forward to the floppers waiting mutely in their harnesses. They had a sad, downtrodden look. Hitchcock let his camera dwell on them.

Unfortunately, they were ugly as sin.

He demanded quarters of his own, and got them. Coldly, he rejected the suggestion that a flopper could carry his luggage. Lordly, austere, he strode along the corridor to his room.

When he got there, a flopper was inside. With single-minded concentration, it went on sweeping while Hitchcock laid his bags on the bed. For all the sign it gave, it might not have noticed his entrance.

It would have been as tall as Hitchcock, but its legs were too short. Its pelt was silvery gray. Its head was revolting—a slab-shaped, almost neckless thing set on top of a shoulderless body. The big, goggling eyes were placed far apart, leaving space for the big, lipless mandible-jaws in between them. On top, the single ear stood up like the peak of a much-too-small cowl.

The rest of the creature was equally hideous—the flexible arms as seemingly boneless as a fire hose, and the flat, big, floppy feet. It was marsupial, with a pendulous pouch that pulsed spasmodically, as if something alive was inside. But the creature was also unquestionably—almost indecently—masculine. It had a musky smell. Hitchcock stared at it with sick distaste.

It continued to work the broom with brainless absorption. It swept around Hitchcock's feet as if he was a piece of furniture.

"Stop that!" Hitchcock commanded offensively.

The flopper stopped. Looking up at him dumbly, it rolled its bulbous brown eyes.

"Get out of here!" Hitchcock told it.

The flopper just looked at him, dumb and trembling. Tentatively, it started sweeping again.

"No! Get out!" Hitchcock yelled.

Frantically, the flopper went on sweeping. It tried to work too fast. The broom flew out of its flipperlike hands and whacked Hitchcock's knee. Hitchcock yowled with pain and rage.

The creature fled, bounding out the door on all fours. Hitchcock grabbed the broom and chased it as far as the hall, until it disappeared around a corner.

Slamming the door, Hitchcock went back and sat on the bed. He rolled down his hose to inspect his whacked knee. It was an angry red, but not damaged.

The stupid brute!

Someone knocked on the door. Hitchcock pulled up the hose and refastened the top to his undershorts. Smoothing down his tunic skirt, he said, "You may enter."

A slovenly dressed man came in—ankle socks, ill-fitting kilt, and turtleneck. He had a full, untrimmed, black beard. "What's the ruckus in here?" he asked.

"Ruckus?" Hitchcock repeated incredulously. "Here?"

"Yeah. Here," the man insisted. "One of my cleaning boys skedaddled out of this hallway and dove in his hutch like a carload of hell was looking for him. He'd cleaned up this far, so he must've been here." He glanced down at his feet. "That's his broom." He picked it up.

"I told it to leave," Hitchcock said. "I refuse to be a party to its slavery."

"Exactly how did you say it?" the man asked intently.

"I asked it please to get out of here," Hitchcock stated primly. "I must say the creature was unpardonably stupid. I had to repeat it twice."

The bearded man looked skeptical, but didn't challenge

the assertion. "That's not in his vocabulary," he told Hitchcock. "You're new here, so I guess it isn't your fault. But after this, if you want a flopper to scram, say, 'That's all,' and he'll get right out. They're real obedient if you're proper with 'em. But you got to give 'em the right commands."

"I'll keep my own room clean," Hitchcock announced frigidly. "Keep your slaves out of here."

"If you want 'em to stay out, bolt the door," the bearded man advised. "It'll worry the boy to have his routine monkeyed with, but it's better than to scuttle his training."

"Keep them away from me," Hitchcock repeated.

The man looked him up and down. His eyes were steady. "Don't expect 'em to understand everything you say," he said finally. "They don't."

He backed out of the room and shut the door.

Mindful of his banged knee, still seething, Hitchcock rummaged in his bags for the liniment tube he always carried. He most certainly *would* keep his door locked. The mere thought of that mindless creature pawing his possessions made him tremble with rage.

It was terrible, the indignities a man of good will was forced to endure!

2

"I hope your room is satisfactory," Ben Reese said as they began Hitchcock's tour of the outpost. He was a plump man, Ben Reese—almost forty, with a round face and an almost bald scalp. Hitchcock worried him.

"Adequate," Hitchcock replied. He had a nerve-rattling way of walking—never looking where they went. Constantly, he twisted his head in one direction, then another. "Spartan, but adequate."

"We don't have many luxuries here," Reese admitted. "Everything we have has to come in the supply ship."

"Um-m-m," Hitchcock muttered. "Tell me, Mr. Reese—what is it like to be the undisputed monarch of an entire solar system?"

Shocked speechless, Reese stopped in his tracks and stared at the man. "I don't think you understand," he said finally. Hitchcock walked loftily on. Reese had to run

to catch up. "All I do is . . . is co-ordinate our research work here," he explained, breathless. "And . . . and I estimate our supply needs. The ship only comes once a year—someone has to do it."

But Hitchcock's attention was on something else. Maybe he was deaf—he didn't seem to have heard.

They followed the dome's main hall. Their buskinned feet whispered softly on the tiles. Only a few people passed them. In the dim light, the near silence, it was like the cellars under a castle. Floppers intent on their tasks scurried past like industrious gnomes.

At the hall's end, where it split into two out-curving corridors, Reese paused. "Would you rather see the anatomy lab first?" he asked. "Or the biochemical department?"

Hitchcock didn't reply. Not far up one of the corridors, a flopper was belaboring the floor with a mop. A sloppy bucket sloshed by its feet. With an almost expressionless look of glee, Hitchcock turned his camera on it.

The flopper worked on, oblivious of them. After a long moment, Hitchcock stopped his camera and turned. "You said something?" he inquired.

"I asked what you wanted to see first," Reese said.

Hitchcock glanced down at him as if he were a bug. "It makes absolutely no difference," he assured Reese. "Before I am done here, I will expect to have seen everything."

They went on with the tour. For Reese, it was an endless trial. Hitchcock listened only to the things he cared to hear, and trained his camera on every laboring flopper they passed.

Reese endured it as long as he could. He had no illusions why Hitchcock had come to Xi Scorpil—the man was convinced the floppers were victims of human oppression, and planned to expose it. He and his Society for Humane Practices had already done something like that on a score of other planets, completely disregarding the actual facts. Reese had hopes he could persuade the man to leave Xi Scorpil alone, but he had no idea how he could do it.

Finally, when Hitchcock unlimbered his camera at the sight of a flopper washing dishes in the commissary, he thought he saw his chance.

"Why are you doing that?" he demanded.

"I am gathering evidence," Hitchcock replied. He held his whirring camera steady, not looking at Reese. "When I return home, I intend to see this outrage stopped."

Reese was nonplused. Even knowing Hitchcock's intentions, he could not imagine what the man was talking about.

"I will not stand still and see any person enslaved," Hitchcock stated.

So that was it. "But . . . they're *animals*," Reese explained. "We've trained them to do these jobs because we don't have enough people here to do them. They . . . they're just domesticated animals."

Hitchcock put up his camera and turned. "Do you ask me to deny the evidence of my own eyes?" he demanded. "I see this one washing dishes, and you tell me it's only an animal?"

"Why not," Reese wondered softly. "It's a . . . a rather intelligent animal, of course—somewhat more advanced than, say, the terrestrial chimpanzee. But that still leaves it far below the human level. Are . . . are you against using animals to take the burden of work off a man's shoulders?"

Hitchcock said succinctly, "Let us continue our tour."

He walked off, forcing Reese to tag after him. They were out in the corridor again when Hitchcock said, his voice scathing, "I was advised that the welfare of the natives was being neglected, but—"

"Who told you that?" Reese wondered blankly.

Hitchcock was impatient. "It's common knowledge on every civilized planet," he stated.

"But it . . . it's not true!" Reese protested. "You can't even properly call them natives. They're only animals—in fact, rather primitive animals in most respects. They do have fairly well developed brains—that is, we can teach them some reasonably complicated things, and they have moderately good judgment—but they haven't any abstract reasoning power, or the ability to symbolize, or . . . or social instinct—none of the things that make people human."

"I came here," Hitchcock replied, "to judge that for myself. I have heard excuses like yours on other planets I've visited—planets where the most outrageous violations

of decency were practiced. Why, can you imagine—on Epsilon Eridani they were actually *eating* them! As for conditions here, I will come to my own conclusions.”

He paused then, slowed his stride, and turned to Reese. “Well, where do we go now?”

Originally, Reese had planned for them to continue along the corridor. The microfilm reference library would have been next. But now, suddenly, he changed his mind. He nodded across the corridor toward a spiral stairwell.

“Down there,” he said.

As they clambered down the narrow stairs—Reese going first—Reese said, “So far, you’ve only seen floppers who were born here—I mean, here in the dome. You see, when this”—he gestured inclusively around himself—“was being built, they were brought in for study, to set a standard we could guide our work by. They’ve been here ever since. We’ve let them breed without any control, and they haven’t been under the selection pressure the ones outside have been under, so they still ought to be almost identical to their ancestors. That makes them a good comparison-standard against the floppers outside.”

They emerged from the stairway into a corridor that looked very much like the one they’d left. Reese led Hitchcock into a side corridor which ended at a double-doored threshold. Passing through, they walked out onto a gallery overlooking a roomful of partitioned cubicles on the floor below. Most of the cubicles had floppers in them.

“These are wild floppers we’ve brought in to examine,” Reese explained.

Hitchcock crossed to the rail and aimed his camera downward. “They are no different from the others,” he declared truculently. “Must you keep them in solitary confinement? It’s inhuman!”

“But it’s not like that at all,” Reese tried to explain. “They come from different geographical areas, and we put them back when we’re done with them. We have to keep them apart to prevent them from breeding. Besides, they might kill each other.”

The sound of their voices had made the floppers look upward. Their lipless, fleshless jawbones clashed slaveringly.

Hitchcock moved his camera back and forth across their upturned, bloodlusting faces.

"I want you to see something," Reese said. He crossed to a cold locker recessed in the wall and took out a large haunch of meat. It was a hideous blue-green color, and a translucent, cartilaginous length of bone protruded from it.

"Watch," he told Hitchcock.

Hitchcock was horrified. "You're going to feed them *that*?" he demanded. "But it's putrescent!"

"Oh, no," Reese assured him, earnestly shaking his head. "That's its natural color." He did not add that it came from a domesticated flopper which had died; Hitchcock would have claimed he was promoting cannibalism. Crossing to the rail, he dropped the haunch into one of the pens.

The flopper grabbed it before it hit the floor—grabbed it between its flexible paws and crammed it against its maw. It masticated the meat, bone and all, with its toothless, bare-bone jaws. It worked the meat to a messy pulp and sucked it inward, its throat pulsing hideously.

When they saw the meat dropped, the floppers in the surrounding pens tried to get to it—tried to leap and climb out of their prisons, but the pen walls were too smooth and high. Blind-stubborn, they kept on trying, slamming their bodies again and again against the partitions. They yelped crazily. The room was full of thunder, rasping screams, and screechings.

Through it all, with wild looks of apprehension, the favored one suckled and gobbled at the haunch. Its lipless mouth worked greedily. Trickle of blue-stained drool oozed down its front. In a remarkably short time, the haunch was gone without a trace.

The other floppers were still trying to reach the pen where they had seen the haunch fall. And now, gorged and still drooling, the flopper in that pen was trying to get out, too. It leaped and fell back, leaped and fell back, time after time—its goggling brown eyes turned upward, its appetite whetted. Involuntarily, Hitchcock flinched back from its ferocity, then bent eagerly forward so his camera could

witness its rage. The crazed creature's hacking cries were swallowed in the general tumult.

Hitchcock stopped his camera, finally, and turned. He shouted something. The noise smothered his words. Reese gestured to the door. He led Hitchcock outside.

When the door closed behind them, shutting off the ear-blasting noise, Hitchcock turned on Reese.

"They seem to hate you," he observed. "Don't you feed them?"

"We fed them not more than an hour ago," Reese said, with a glance at his watch. "They didn't behave with much intelligence, did they?"

"Hm-m-m," Hitchcock growled. "A starving man would act that way."

"But these... they weren't starved," Reese argued. "They were probably half-starved when they were captured, of course, but they've been fed since then—most of them several times."

"I cannot believe that," Hitchcock retorted. "Those creatures were *starved*."

Reese shook his head. "Their reaction was pure habit," he said. "Food is scarce for them. It's been scarce all their lives. Their... their ravenousness is natural for them."

With a look of scornful pleasure on his face, Hitchcock pounced. "May I ask why you permit them to starve?"

It came to Reese that he had made a mistake. In trying to win a small argument, he had given Hitchcock support for a much more serious—much more difficult argument.

"Why... why," he stammered. "We're scientists. We're here to... to *study* the floppers. It's our whole reason for being here. You see... you see, we believe the floppers stand a very good chance of developing human-level intelligence. We've been watching for signs of it for nearly a thousand years, now. And if we tried to make their lives any easier, it would interfere with their development."

"Nonsense," Hitchcock sniffed.

"It isn't nonsense," Reese persisted reasonably. "It's a logical conclusion based on the principle of natural selec-

tion. If you'd let me explain the situation here—"

"I am fully aware of the situation here," Hitchcock replied. "I consider it disgraceful."

Reese gritted his teeth. "This is an unusual planet," he said earnestly, hoping the man would pause and begin to doubt. "That is, its orbit is unusual."

"Well, certainly," Hitchcock said. "I would expect a planet in a double-star system to have a distorted orbit."

"It's worse than that," Reese persisted mildly. "When this system was explored the first time, this planet had an orbit around Alpha—it's still in the books as Alpha II. But now it's going around Beta."

"What?" Hitchcock boggled. "Preposterous."

"It's true," Reese said helplessly. "And not only that, we think Alpha and Beta have been passing it back and forth ever since it was formed. They have rather eccentric orbits around each other, you see, and they come rather close together every forty-five years. If the planet is in the right part of its orbit when they're closest together, the other star captures it."

"Does this happen very often?" Hitchcock asked sarcastically.

Reese made a helpless gesture. "It's different every time," he explained. "It might stay with one star for a hundred thousand years, or maybe just for a couple of hundred. Each time it's traded, it takes up a different orbit—that is, different from any it's ever had before. The next time it happens will be three and a half thousand years from now."

Hitchcock sniffed. "This is very interesting, if true," he said. "But it has nothing to do with the deplorable way you have treated the natives."

"It has everything to do with how we treat them," Reese insisted. "You see, every time the planet changed orbits, its climate has been drastically altered. We have a lot of geological evidence of that. I guess Alpha and Beta are more similar than most binary pairs, but there's still quite a difference in their radiation. And the various orbits the planet took put it at different distances out from them."

"I presume this has some significance," Hitchcock interrupted testily.

Reese nodded. "We're almost certain that the living things on this planet can endure great extremes of climate—if they couldn't, they'd have died out long ago. It's even possible that life here was wiped out completely by some of the changes—it might have happened hundreds of times before the cycle we're seeing now got started. I don't suppose we'll ever know for sure."

Hitchcock looked down at him with a fastidious expression on his face. "Never have I heard such a preposterous idea," he declared. "As if the spark of life could be snapped off and on like an electric lamp."

Reese had heard of people who thought like that, but he had never met one before. It was like meeting something out of the dark ages. "I was trying to emphasize how . . . how hardy the life-forms on this planet must be," he explained diplomatically. "How . . . how *adaptable*. We think they have the capacity to evolve hundreds of times faster than on any other planet. So you see, being here is a wonderful opportunity to see evolution at work. And—"

"You have not yet explained," Hitchcock reminded him again, "why you have neglected the welfare of the natives here . . . why you vivisect them, and—"

So he was back where he started, Reese thought. It was discouraging, "Why, I thought it was obvious," he explained. "The floppers aren't really intelligent—yet. But they do have the . . . the potential to *become* intelligent. It's really almost inevitable in a situation like this—that is, with an unpredictably erratic environment, intelligence is almost certain to develop sometime, because intelligence is the one specialization that gives an animal the ability to live in a whole lot of different environments. You see, we're not just studying the evolution process here—we're . . . we're watching the development of intellect. Sooner or later, somewhere on this planet, the floppers are almost certain to become . . . to become *intelligent*. I mean, intelligent the way a . . . a human being is intelligent. And we want to be here. We want to see it happen. We've never had the chance to see it happen in an animal before."

Hitchcock scowled. "You speak as if men were animals," he criticized. "As if an animal could have a mind."

"Well, human beings are a form of animal," Reese put in. "That," Hitchcock snapped, "is nonsense. Dangerous nonsense. I want to hear no more of it." He hitched up his camera's shoulder strap. "As for this matter of intellect, I have only your word they are not intelligent right now. I will have to have proof, Mr. Reese. I must have proof."

Ben Reese gave up. He could not prove a thing to a man who refused to believe.

INTERLUDE

It was a good time to hunt. No wind blew loose snow on the screecher's tracks, blotting them. No mistiness obscured the distance, and the sky's light shimmered on the white land. Qua-orelee kept his eyes tightly lidded to lessen the glare. The tracks were new. The beast could not be very far ahead. Qua-orelee loped along, following them, but he stayed well aside of the trail for fear the snow would open under him like a mouth and devour him.

He had seen it happen, once. He and some other people were following the tracks of a bushy-tailed runner, and one of the people went close to the creature's trail. A hole opened under him and he was gone. Qua-orelee and the other people fled instantly. Since that time, Qua-orelee had never gone closer than three body-lengths to any creature's trail—not even his own.

The screecher's tracks vanished over the crest of a rise. Qua-orelee veered away from the trail, to reach the crest well away from where the screecher had been. It was hard to climb the slope with only his rear legs. He dropped down and hobbled along using one of his front limbs. In the flipperlike hand of the other, he clutched his rock.

His rock was a treasure—his only possession. He would need it when he came upon the screecher and had to kill it. It was hard to find a rock of a good shape and size for killing beasts with, but a rock was wonderfully better than ice. Ice broke easily. It didn't keep its shape. And, too, it took a much stronger blow to kill with it.

He never let the rock out of his sight, and rarely out of his hand. He clasped it to him when he slept, and he slept

in his own secret place. Any other of the people would eagerly kill him—if they dared to try—to possess that rock.

He topped the rise. Below him, the screecher's trail turned down along the valley, away from him. Qua-orellee let out a high-hacking cry, to tell the people who had joined him in the hunt that the screecher had turned in a new direction. Shrill, rasping calls came back from either side of him, repeating the news. Then another cry came from down-valley—the beast had been seen.

Qua-orellee clutched his rock against him and plunged eagerly down the slope. His big, flipper-feet and short legs made him stumble. He rolled all the way to the bottom in a cloud of snow, but he didn't let go of his rock. No matter what happened, he would never let go of his rock.

He stood up and shook the snow out of his fur. Up-valley, two more people—not encumbered with rocks—were bounding down the hillside on all fours. They continued across the valley and up the other slope. When they reached the crest, they headed toward where the screecher had been seen. Qua-orellee stayed in the trough of the valley. He followed the trail.

The valley curved around the bulk of a massive, steep hill. As he rounded the turn, Qua-orellee saw the screecher far ahead. Three people up on the ridge had gotten abreast of the beast, and one of them was lolling down into the valley to head it off. On the ridge on the other side of the valley, the two who had crossed over were rapidly catching up, running on all fours. Qua-orellee was far behind. He hurried as fast as he could on his short legs and large feet.

The other people closed down into the trough of the valley, forming a wide-spaced crescent-circle line in front of the screecher. They had picked up chunks of ice and ice-spears. They confronted the beast.

The screecher stopped. It hunched down, as if to leap. They advanced toward it, ice weapons brandished. For a long moment, the screecher did not move. Then, with a snarl, it turned and retreated up the valley toward Qua-orellee.

Qua-orellee rushed to meet it. It saw him and veered away—started up the side of the valley. One of the people, gal-

loping along in pursuit, headed it off. It swung back down into the valley, toward Qua-orelee. Qua-orelee stopped and stood erect, holding his rock high above him in both hands.

The beast charged. Its muscles pulsed and slackened rhythmically. It screamed its rage and savagery. Unflinching, Qua-orelee tensed himself to smash his rock down on the beast's skull. He watched the beast surge toward him, screeching.

Fearlessly, he waited.

3

Ahead, the land loomed in the cold mist, a high mass of darkness rising out of the gray, frosty sea. Hitchcock cringed from it as it rushed overwhelmingly toward him, but then the pilot sent the skimmer sailing toward the crest. Hitchcock looked down dizzily at the crumbling, ice-crusts cliff. Sudden gusts of wind slammed into the small craft. It bucked and jolted, and the pilot fought silently. The engine surged.

Then they were over the land. The winds fell away. Hitchcock saw spread before him a desolate plain of ice and crumbling stone, and beyond, towering high, the white mountains.

But not one living thing.

The pilot twisted around and looked to the man in the midship seat. "Want to check the traps?" he asked. His parka hood was pushed back, and the wind mask dangled from his throat like a bib.

"Yeah," Muller said. He had a snarling voice. "Check 'em. He—" He meant Hitchcock. "He wants to see how we work. But they won't have caught anything."

The pilot nodded, shrugged, and turned front again. The skimmer leaped forward.

Hitchcock lifted his camera. The utter lifelessness of the rock-littered plain was oppressive. It was something the people back home ought to see. This scene, more than any words he could say to them, would impress on them how dreadful Xi Scorpui was.

Muller twisted around to face him. Reluctantly, Hitchcock put down the camera and waited for him to speak.

"We'll see if our traps've caught anything," Muller said. "If they haven't, we'll have to go catch our own."

"What? Do you hunt them?" Hitchcock demanded. The mere idea was appalling.

"We got to get specimens somehow," Muller told him.

The skimmer settled down close to the ground and streaked over the plain. The weathered boulders sprawled kaleidoscopically across their path, momentarily slashing at them, then vanished in the distance behind. Ahead, the glacier-choked mountains rose into high, wispy clouds.

"How's it look?" Muller asked. "Pretty bare, huh?" He chuckled. "Wait a couple of months. Right now, it's the tail end of summer."

"Summer?" Hitchcock wondered incredulously. Here and there, a few hardy plants dug their roots into chinks in the rock, clinging to existence. Their segmented limbs and stems were frost-burst and coated with rime. Their fleshy, gray-green spines were spread in plaintive supplication to the distant sun.

Tentatively, Hitchcock raised his camera.

"Yeah, summer," Muller repeated. "We get about a whole year of it—one out of four. We're closer to the sun, then. Sometimes the temperature gets up as high as fifteen, here in the tropics—sometimes for weeks at a stretch."

"Only fifteen?" Hitchcock gestured at the rock-strewn, snowless plain. "Why isn't the snow—"

"Fifteen centigrade," Muller explained shortly. "But it just thaws out close to the ocean. The other side of these mountains, there's plenty of snow. You'll see."

The mountains bulked massively over them. The snow-sheathed slopes and bare rock cliffs reared steeply upward like a titan's wall. For several minutes, the skimmer cruised along that wall, then swung directly toward it where a glacier oozed from a narrow valley down onto the plain.

The glacier's front was like a cliff, sheer and awesome, leaning outward. Berg-sized fragments, broken from it, lay in rubble at its feet. Engine snarling, the skimmer rose before the pebble-pocked wall.

Strong, battering bursts of wind hit the craft as it cleared the edge. Its engine screamed as it forced its way forward into the cold air flowing down from the mountains. Yawning fissures and dark, rippling veins of embedded pebbles streaked past beneath them.

Hitchcock lifted his camera again. The glacier imprinted itself on his tape. "Where are we going?" he asked.

"The other side of the mountains," Muller said. "Where the floppers are."

Hitchcock looked up at the mountains. The valley had curved. Mountains rose skyward all around them.

"But aren't floppers—" How he hated that silly word! "Don't floppers live back there?"

"Not many," Muller said. "That section of coast is cut off from the rest, and there's nothing to live on in winter. Mostly, they stick to the snow country."

"Snow country?" It sounded ominous. "How can they live?"

"They get along," Muller said.

The glacier swelled upward steeply where it squeezed between two mountain shoulders. The skimmer sailed loftily over the crest—flew on into the heart of the mountains.

"How?" Hitchcock demanded. "What do they live on?"

"They take in each other's wash," Muller said.

"I don't understand," Hitchcock said blankly.

"They gnaw each other's bones. Put it that way."

The skimmer descended from the mountains to a land of low hills smothered in snow. The sky was cloudlessly blue, and sunlight shimmered blindingly on the frozen, white wasteland. Hitchcock adjusted his camera to minimum sensitivity, to compensate for the glare.

"There it is," Muller said. "Flopper country."

Hitchcock thought of a baron showing off his domain from a castle's wall. "Where are they?" he asked.

Muller snorted. "Oh, they're out there. But it's a lot of land, and not many floppers. Our last census put it at about one for every twenty square miles. And without a body heat spotter, half the time you don't see 'em." He handed Hitchcock a pair of sun goggles.

The skimmer struck out across the rolling land. It

stayed high over the hills. "The traps don't signal," the pilot announced. "Check 'em anyway?"

"Naw. Skip it," Muller grumbled. "Just waste our time."

He twisted around to speak to Hitchcock. "Traps don't catch much, these days," he said. "They're getting too smart to get caught."

"Oh?" Hitchcock asked, interested.

"We use pit traps," Muller explained. "Any other kind'd be no good in this kind of country. They caught a lot of 'em, a couple hundred years ago. Not any more."

"I see," Hitchcock said. He was almost delighted. At least the creatures weren't completely at the mercy of these men.

"You know what I think?" Muller confided. "I think all we ever caught was dumb ones—the smart ones knew enough not to get caught. Now the dumb ones've died out—there's nothing but smart ones left. So we don't catch 'em. Not with traps, anyhow."

"But you catch them?" Hitchcock inferred.

"Yeah. Sometimes," Muller said. He called forward to the pilot. "Head for that place we found all the tracks last week. Maybe they'll still be around."

"How?" Hitchcock asked. "How do you catch them?"

"You'll see," Muller answered. He rummaged in a compartment under his feet and brought out a net. He unfolded it and laid it in a long, narrow roll on the cowlings beside himself and Hitchcock, up against the cockpit's transparent canopy. He hooked lanyards from the exposed corners to grommets inside the cockpit, just under the rim.

"Dr. Muller," Hitchcock said, almost pleading, "haven't you done *anything* to help these poor creatures? Do you simply let them *live* in this horrible country? And starve? Freeze? Die—?"

"Why not?" Muller wondered. "They're just a bunch of animals."

"Why . . . why it's your human duty," Hitchcock protested, shuddering.

"Look," Muller said with a firm, inflexible patience. "We're scientists. We're here to study these critters—watch 'em and see if they evolve. If we tried to help 'em, we'd mess things up. We couldn't tell what happened naturally

and what happened because we made it happen. Anyway, they're no worse off than if we hadn't discovered this planet."

"Dr. Muller," Hitchcock said, condemnation in his tone, "you haven't one spark of humanity in you."

Muller laughed. "Good thing I don't, or I'd be no good here," he said. "Look, mister. These critters have it hard—they've got to live in this country, or they die. And if they live, it's because they've adapted. And if they adapt, it's because they're evolving. Do you want to get in the way of that? Do you?"

"It's indecent!" Hitchcock sputtered. "Criminal! You'd let these poor creatures die and . . . and suffer without lifting a hand! Why, they have the same right to live that you do. I will see them granted that right."

"Go ahead," Muller sneered. "Just don't interfere with our work. This here's the biggest project in the universe."

"Tracks," the pilot reported.

Hitchcock looked out. Far below, a thin trail threaded across the crest of a low hill and down a steep slope. The skimmer paused and settled groundwards. The trail became the dragging tracks of a clumsy, struggling animal—the flattish footprints close-spaced and scuffed, as if the feet had not been lifted clear of the snow.

"It's a flopper, all right," Muller decided. "Cruise around—let's see if there's more."

The pilot kept them low. They followed the low ridge and crossed several more trails, all of them headed in the same direction. "Looks like a hunting pack to me," the pilot judged.

"That's what it is," Muller confirmed. And to Hitchcock, "They just started hunting like this about forty years ago. Most of 'em still hunt by themselves, but every once in a while we find signs of 'em working together—like this."

Hitchcock let his camera scan the pattern of tracks in the snow. "Is it significant?" he asked.

"Yeah," Muller said. "They're not gregarious critters. Like I said, most of 'em hunt by themselves. This is the first sign we've had of 'em getting together—they're developing a social sense."

"Civilization?" Hitchcock wondered, awed.

"It's the start of it," Muller said. "Right here."

The pilot had turned the skimmer to follow the hunting pack. Muller pointed down at one of the trails in the snow. "That's the tracks of the thing they're after."

It looked very much like the other trails—slightly messier, with the footprints overlapping in a complicated pattern. Hitchcock gave his camera a long, careful look while the skimmer swept up the slope of the low hill and down the other side into the deep valley.

"It's just another sign they're turning smart," Muller said. "Them hunting in packs, I mean. That's evolution working. It takes brains to stay alive in a country like this."

"Do you mean to tell me," Hitchcock wondered, "that *this* is why you refuse to help them—so you can watch their desperate struggles? To . . . satisfy your own curiosity?"

"Sure," Muller said. He sounded very satisfied with himself. "Can you think of a better reason? Besides, we may have to fight 'em some day. It'll be a good idea to know all we can about 'em."

"But what possible reason could we have for fighting these . . . these pitiful creatures?" Hitchcock protested.

"If they get smarter than we are," Muller told him, "we *better* fight 'em. And I've got evidence they're going to."

That seemed to settle that. Hitchcock shuddered with horror. For the first time, he could understand Muller's attitude. It troubled him greatly, and he knew it was wrong. He was sure it was wrong. It had to be!

But he, too, was afraid.

The quarry's trail turned to follow the valley. The pilot banked the skimmer sharply to turn after it. "Those tracks look new," he observed.

"A couple of hours or less," Muller agreed. The skimmer rocketed down the valley. Hitchcock leaned forward, peering ahead. He held his camera ready to use.

"Are they very far ahead?" he asked.

"Hard to tell," Muller answered. "They can move pretty fast when they want to." He pointed to a set of tracks that

paralleled the tracks of the quarry. "That boy was using three legs—sort of like an ape when it's running. They do that when they're in a hurry—or else all four."

"They run like *animals*?" Hitchcock demanded. He had a vision of the bumbling, shambling creatures bounding along on all four legs like beasts. The thought was appalling.

The skimmer skidded around the curve of a high, mound-like hill. And there they were. Still far ahead and indistinct in the sun-glare, they were nevertheless unmistakable. Floppers—eight or ten of them.

"Pull back," Muller snapped.

The skimmer bucked and shuddered as the pilot slammed it to a stop against the windblast of its fans. Quickly, they slipped back around the curve of the hill.

"Now you'll see how we do it," Muller told Hitchcock. "Better get buttoned up. It's cold out there." He helped Hitchcock with the unfamiliar clasps of his wind mask, and made sure his parka was zipped tight.

Then he got busy in his own part of the cockpit. Hitchcock leaned forward to see. When he had his own wind mask in place, and his parka was tight, Muller opened the canopy on the side where the net lay rolled on the cowlings. A blast of cold air burst into the cockpit. Hitchcock felt it even through his thick clothes. It leaked in through his mask and around the brow ridge of his goggles. Painfully, it invaded his nose as he breathed.

Muller pointed to the grommet near Hitchcock's knee, where the net was secured. "Is it tied down good?" he asked. His mask muffled his voice. Hitchcock glanced down negligently and nodded.

Not that he cared if it was tied down properly or not. It was revolting merely to think of using a net to capture a flopper. Such things were unfair—unsportsmanlike.

But Muller accepted the answer. "Let's go!" he barked.

The pilot leaned forward, pushing the control stick all the way front. The skimmer tilted forward. The engine surged.

They skittered around the curve of the hill, then straightened out and drove. Hitchcock felt the icy wind smash

against him. Intense cold leaked through his parka's fastenings. The wind thundered around him. He raised his camera and focused it on the place far ahead where the floppers were gathered. The skimmer hurtled forward like a boat on the crest of a wave.

Muller held a set of binoculars up against his goggles, studying the scene ahead. "They got the thing surrounded," he announced. "One of 'em's got a—" He stopped. "Get that one!" he rapped out. "The first one we come to. He's the one we want!"

Hitchcock could make them out, now. A line of floppers was driving a sinuous, short-legged beast toward another flopper. That flopper was standing still, its back to the skimmer. It held something over its head with both of its flipper-like paws. The beast was gliding toward it like a snake.

"That's the one we want!" Muller yelled into the wind.

Muller pushed the rolled net over the skimmer's side. It unrolled and flapped sluggishly in the wind. The skimmer rocked.

They were very close, now, and traveling fast. A plume of wind-lifted snow blew up behind them. Hitchcock held his camera fixed on the flopper. The scene exploded into largeness before them.

At the last moment, the pilot spun the skimmer broadside, setting the net to scoop up the flopper. At that instant, Hitchcock reached down and wrenched the net's anchor cord from the grommet near his knee.

Because he was doing that, his camera did not record what followed. The net, robbed of half its support, bunched into a bundle which clubbed the flopper from behind and tumbled it into the snow. A large, ragged, heart-shaped rock flew from its paws.

The skimmer hurtled onward from its own momentum. The pilot fought to slow it down. Hitchcock raised his camera again.

He got what happened next on the tape—the catlike pounce of the beast, the desperate struggling of the flopper, and the sudden gush of turquoise blood on the white snow.

"You see?" Hitchcock cried triumphantly "You see? *That's* how you make them live! You murderers!"

4

It was days later that Hitchcock commanded Muller to show how he measured the floppers' intelligence.

Consistently, as his investigation progressed, he had heard their intelligence disparaged. It was a lie and a conspiracy, of course, but he was gradually forced to the realization that the ultimate success or failure of his mission would depend on whether he could turn up evidence to prove they *were* intelligent.

Muller smiled and took him into the laboratory.

At first, what he saw was not encouraging. The problem tests were fantastically simple. In fact, when he tried them, their solutions were practically obvious. But he did force Muller to concede that the floppers could do them, too.

"Yeah, they do 'em," Muller said sneeringly. "They do 'em almost as good as you do."

Then they came to some problems not so easy. Problems like the fire-moat, in which—to reach a scrap of food—the flopper had to cross a wide bed of flame-bright coals.

Baffled, Hitchcock paced back and forth along the edge, his hollow-jowled face made ruddy by the heat. There wasn't any way he could do it. No way at all. Finally, he gave up. "This is impossible," he protested.

"Yeah?" Muller smiled. He walked over, picked up a mat from the floor, and threw it across the hot coals.

"How should I have known it was fireproof?" Hitchcock protested. He was using his camera again, recording the problem and its solution.

"How did you know it wasn't?" Muller answered. "You should have tried it, to find out."

"But you can't expect an...an untrained savage to think of *that*," Hitchcock argued.

Muller shrugged. "It's a tough trick, all right," he admitted. "But we've had a few floppers do it."

"Impossible," Hitchcock snapped.

"Not those floppers," Muller snorted. "They were *smart*."

"What?" Hitchcock wondered. He wasn't sure he'd heard right. "Not really!"

Muller shrugged and smiled. "We have had a few smart ones," he admitted.

Hitchcock paused, inwardly jubilant, but he pretended not to be especially impressed. Like a hunter catching sight of his prey, he decided to wait—to bide his time and hope that Muller, unsuspecting, would make further revelations.

The man had the proof he—Hitchcock—needed. That was all he had to know.

There were more problems, most of them even more difficult. Hitchcock managed to solve very few of them, in spite of his heightened vigilance. Muller didn't explain how he expected floppers to solve them, when even a man was baffled. He just smiled.

Hitchcock used his camera to record the ones that stopped him. If the floppers were considered stupid on the basis of tests like these, it was good proof that they *were* intelligent.

Then they came to the maze problems. Hitchcock blundered through the first few simple ones and came out pleased with his own accomplishment, but annoyed because he couldn't use them for evidence.

"Well, at least *these* are simple enough," he snapped.

"We just use those to give 'em an idea what a maze is," Muller told him. He conducted Hitchcock into another room, where a gigantic panel of signal lights covered a whole wall. He opened a door and motioned Hitchcock inside. Confidently, Hitchcock walked in.

The door clicked behind him. When he turned, there wasn't a sign of where the door had been.

An awful, trapped feeling seized him. He pounded on the wall and shouted. No one answered. The tunnels around him swallowed the sounds without an echo.

He started to run.

Half a minute later, out of breath, he stopped.

This wasn't like the other ones. This one was *hard*.

He looked around. Nothing looked familiar. He couldn't even be sure which way he'd come. He was lost.

Appalled and fearful, he started to search. It was useless. The passageways branched and intersected endlessly. They curved and zigzagged and circled back on themselves. He

lost all sense of direction—all sense of distance and time. Trying to trace back his steps, he took a wrong turn. Blank walls stopped him. A down-spiraling tunnel descended to a pool of black, utterly motionless water. Wearily, he turned around and climbed up again.

Then he stopped, breathing hard from the climb. The tunnel forked and other tunnels led off from it. Any one of them could be the right one. Or none of them. Blank-minded, frustrated, Hitchcock lifted his camera and slowly swung it in a full circle.

Let the people back home see this, he thought. Let them see the endless convolutions—the total formlessness of this maze. Let them judge for themselves how well it measured a person's intelligence.

And it was because of things like this they said the floppers were animal stupid! It was ridiculous. Why, even a man as intelligent as himself couldn't find his way through. The most brilliant man alive couldn't do it.

"Had enough, Hitchcock?" Muller's voice asked.

Startled, Hitchcock whirled. He was completely alone. "Where are you?" he demanded. "Show yourself."

"Had enough?" Muller asked again tauntingly.

The tunnels twisted around him crazily, shapelessly. A man was a fool to keep trying. He might spend days in this place. Why, he could starve! "Yes! YES!" Hitchcock cried. "Where are you?"

"Wait there," Muller told him. "I'll come get you."

Legs aching with fatigue, Hitchcock slouched against the smooth wall. Why, it was outrageous! The silly rabbit warren didn't even have a place to sit down!

Sigurd Muller came strolling along the passageway less than two minutes later. "How was it?" he asked, smiling raffishly.

Hitchcock straightened up. "How can you believe that this...this silly game gives the slightest indication of a person's intelligence? It's absolutely foolish."

Muller chuckled. "I don't know," he said easily. "It gave me a good look at yours."

Hitchcock sputtered. "Young man, no person could possibly find his way out."

"Yeah?" Muller wondered. "Follow me." He jerked a thumb over his shoulder, turned, and walked off.

"But you *know* the way out," Hitchcock protested. He had to scurry to catch up with Muller.

Muller didn't look back. "It isn't easy," he admitted, walking along almost jauntily. "But some people do it the first time through. We've even had some floppers do it."

"Chance," Hitchcock declared, breathing hard to match Muller's pace. "Pure chance."

Muller shook his head. "It wasn't chance," he said. He was very sure. "You don't get through a thing this tricky just with luck. Not fast, you don't. You either just hunt till you hit it, or you think up a method. If you hunt, you're a good long time getting out. But if you're real smart, you think up a method. Those floppers were smart."

"I was told," Hitchcock said pointedly, "that these natives are not intelligent."

"You were, huh?" Muller growled. He shrugged. "They must've been talking about the tame ones that do our muscle work for us. They *are* dumb. So are a lot of the wild ones, but there's been some smart ones, too. There's even been a few so smart none of these tests showed their limits. And that *is* smart. I get scared when I think about 'em."

Then suddenly, they emerged from the maze. Hitchcock stopped and looked around. They were in the same room he had entered the maze from. The door he had gone through was there in the opposite wall.

"Want to try it again?" Muller asked.

"No thank you," Hitchcock snapped. "I've had quite enough of these childish games."

Wryly, carelessly, Muller smiled. "Anything else you want to see?"

"Yes," Hitchcock said firmly. "I want you to show me proof of these intelligent floppers."

Muller nodded cockily. "I figured you would," he said. "I got it all ready for you."

He led Hitchcock from the testing rooms to a small, file-jammed office. The files were a primitive type, as if the scientists here had never heard of memory crystals. Mul-

ler bent over the librarian's console and punched out a combination. A folder dropped into the delivery slot.

Muller passed it to Hitchcock, and motioned him to the desk. Hitchcock sat down and spread out the folder's contents. It wasn't an impressive display. The data-tables were meaningless. The multi-colored photo plates were nothing but abstract designs. Nevertheless, Hitchcock held his camera over them and recorded them slowly, page by page.

Then Muller's shadow fell across the desk. His finger prodded the stacked data pages. "This is how they went through the tests," he said. With a twist of the hand he fanned the sheets out and pulled free a set of seven pages. He laid them on top of the others. "These are how a scientist-candidate scored—I put 'em in to compare with."

Hitchcock separated the four sets of papers and laid them on the desk—the one of the scientist-candidate and three containing the scores floppers had made. He tried to compare the records, glancing randomly from one set to another. But all four were confusingly similar, and the complex mass of numbers, plus and minus signs, and symbols meant nothing to him.

Muller brushed Hitchcock's hands out of the way. He traced a fingertip across the laid-out sequence of the scientist-candidate's scores. Three-quarters of the way through the record, he paused.

"Up to here," he said, "he was even with 'em. They missed a few and he missed a few—they came out even. But from here on—"

His finger traced to the end of the record, then transferred to the corresponding section of the record of one of the floppers. Instantly, Hitchcock saw that the two were radically different.

"From here on," Muller continued, "they were way ahead of him—faster and slicker. They didn't miss hardly one. And those jobs were *tough*. Just to give you an idea—" He pointed to a spot not quite halfway through the test sequence. "Here's where *you* pegged out."

Astonished, Hitchcock looked down at the expanse of records. The scientist-candidate must have been a genius to score so far above him. And those floppers—he could

not comprehend such intelligence. It didn't matter that he didn't understand the notations or the things they made reference to. Now that it had been pointed out to him, the meaning of those tabulations was plain. He held his camera up and recorded them again.

Muller slapped the photo plates down on top of the papers. "As for these—" he said. "These are brain tissue." He indicated three sheets of eight photos each. "These came from the floppers—the smart ones. And these"—he tapped another set—"are a man's brain. I figured you'd want to compare them, but don't trust it too far—flopplers' brains aren't made the same. This one's"—he pointed to the fifth set of photos—"from a normal flopper—one of the boys we keep around to do the work for us."

Hitchcock tried to study the photo plates—tried to discover the similarities and the differences in them. But his eye was not trained—he didn't know what to look for. The plates were as meaningless as the data sheets had been. Again, Sigurd Muller helped him.

"We use a variable intensity dye," he explained. "Where it's thin, it shows up red—where it's heavy, it's blue. We put it in one cell on each plate."

He tapped one of the photo plates—the human one—where a blue splotch lay against a pale green-yellow background. Rootlike arms spread out from the splotch in all directions, branching and rebranching into countless red filaments thinner than hairs.

"That's one brain cell," he said. "Those"—he indicated the arms and the red filaments—"are how it makes connections with the other cells. Put a lot of 'em together and you've got a whole network of connections. This one's different from the others, but all of 'em have connections like that. That's what makes for intelligence—connections."

Hitchcock frowned. These things were difficult to grasp. "Repeat that," he requested.

"Take it this way," Muller said. "Intelligence depends on a lot of units being tied up together in a network of communication—a lot of connections and a lot of channels of contact. The smarter you are, the more interconnections you've got, and it goes the same the other way around. So

there's two ways you can be smart, if you've got a big enough brain case to start with. You can have ordinary-size brain cells with a lot of these connecting threads, or you can have a lot of cells smaller than normal. Now—look what we've got here.”

He tapped the plate with the human brain cells on it. “Here we've got normal-size cells with a whole mess of connections.” He moved his finger on to the samples from the normal flopper. “This boy was dumb—these pictures are the same scale. The cells are almost as big, and they don't have anywhere near as many contacts.”

Hitchcock was using his camera where Muller pointed. He could see that everything was exactly as Muller described it. Muller shifted to the three sets taken from the intelligent floppers. “Now look at these,” he was saying.

The cells were much smaller—not half the size of the cells from the normal flopper—and connecting filaments radiated out from them, proliferating endlessly. They looked like spiderwebs.

Hitchcock caught his breath. Why, minds built of cells like these would be incalculably powerful.

Muller smiled at him. “You catch on easy,” he said.

“Why, they . . . how magnificent!” Hitchcock exclaimed.

This was the proof he wanted—proof that he was told a lie when he was told the floppers were mindless, dumb animals. Proof—undeniable proof—that the floppers were people, and that therefore they were entitled to the fundamental rights of all human beings.

But then an unsettling question—a moment of doubt—came into his thoughts. “How . . . how did you obtain these . . . these wonderful specimens?”

Muller snorted. “How do you think? You don't think we'd let 'em run around loose, do you?”

Hitchcock was aghast. “You killed them!”

“Sure,” Muller said. “So what? They're only animals.”

INTERLUDE

The deadfall had mashed the small animal practically flat, but some of its springy bones flexed back into shape when

Kosh-korrozasch levered the ice block off it. He could see what it had looked like.

What he saw astonished him. It was unlike any creature he knew. He tore off a hind leg. A strip of flank peeled off with it. He squatted in the shelter of a rock ledge and gobbled it, bones and all. Then he tore off the other hind leg.

His hunger subsided then. He paused to examine the carcass more slowly. He had thought he knew all the creatures in the world—their shape, their habits, what they could do, and how they tasted. But this was not one of them.

It made him wonder.

A cold wind-gust blasted him, ruffing his pelt. He hardly noticed. He pondered how it was possible an animal could exist anywhere in the world, and he had not seen it till now. Never, till now, had he seen an animal he did not recognize—not since cubhood, when he was freshly come from his parent's pouch.

From his high vantage, here in a cleft where the land reached a narrow white tendril up into the mountains, Kosh-korrozasch looked out at the world. The white, featureless land spread wide and far in the seven directions, and the mountains that surrounded the land were rough and massive—dark, and patched with white on their slopes. And there, out in the middle of the land where no mountain belonged, the great, lonely peak rose jaggedly to a flat crest. It was as if one of the monsters that lurked underground had been frozen at the moment it was smashing its way up to freedom.

Kosh-korrozasch had been everywhere in that world—had trod every part of the white, cold land—had searched all the tendrils of land that probed into the mountains—searched all the way to their ends, to where the mountains themselves blocked his way. And he had struggled nearly to the top of the great, lonely peak, there in the middle of the land; he had scraped the scale-food from the rocks up there, on the side where the wind rarely came.

He had learned where there was food in the world, and where there was none. He had learned how to find it, to

trap it, to stalk it, and kill it. He knew all he needed to know about the world, and all the animals in it.

.... Except this one dead thing his trap had killed. He wrenched the rearward half of the body from the rest of it, and ate it slowly. It was good tasting food. It filled him with a sense of well-being—of having eaten. Eating was too rare a pleasure. Kosh-korrozash had been part-starved all his life.

But the creature's strangeness still nagged him. He crumbled the thing's foreleg in his maw, and pondered. It was only then that the thought came to him.

It was a strange thought—strange and frightening. But it excited him, and his paws trembled while he ate the rest of the carcass. He ate slowly, savoring the pleasure of food, feeling the thrill and the wonder of his new thought.

Perhaps there was something beyond the edge of the world. Perhaps the creature had come from there.

Life was hard, here in this world. A being starved all his life, and died of hunger. A person spent all his life seeking food, building traps, while the dull ache of hunger gnawed his belly, driving him endlessly on, never satisfied.

Kosh-korrozash paused when he had finished eating. Using the turquoise blood-dribble of his eating for a bait, he rebuilt the ice-block deadfall. He might never come back here—he knew that—but he might. And if he came back, he might be needing desperately the food it might kill while he was gone.

When it was built, he went away. Climbing upslope, he followed the tendril of land that reached up into the mountains toward the edge of the world. If an animal could enter from outside, perhaps he could leave it the same way.

A person searched for food all his life. Slowly, Kosh-korrozash climbed toward the edge of the world.

5

In thirty-two hours, the supply ship would leave this planet for Lambda Serpentis. Adam Hitchcock felt fine.

He would be glad to leave. The dome was like a prison. Outside, the wind was bitter cold and the sea crashed end-

lessly on the island's rocky shore. The domesticated floppers were always underfoot, brainlessly stupid. His quarters had none of the comforts a civilized man was accustomed to, and the food he got was abominably plain.

His endurance had been rudely tested. He was impatient to return to civilization.

But he was satisfied. His mission had been a complete success. He had found out the facts—he knew the truth, and as soon as he returned home everyone would know the truth. The suffering natives would be given—finally—the aid denied them for so long.

And the record of his Society for Humane Practices would remain a record of unblemished success. Truly, he had reason to be proud.

Before he left, though, he had one more task. It was not important—actually only a mere formality: to give the scientists a chance to correct the conditions he had exposed. They would refuse him, of course—he expected that—but when they refused, they would lose their right to protest when he aroused public censure against them.

He walked into the office of Ben Reese. Reese, engrossed in a mound of papers, did not see him at once.

"I'm a fair man," Hitchcock proclaimed.

Ben Reese looked up, startled. His paperwork was like a fortress around him. "Did I ever say you weren't?" he wondered innocently.

Implacably, Hitchcock went on. "I have proof," he declared, "absolute proof—that the natives of this planet are being maltreated and enslaved, that their needs have been ignored, and that your people have been hounding them to death. Nevertheless, I give you fair warning: if you do not correct these conditions, I shall be compelled to make a public report of my findings. If you force me to do that, I will not be responsible for anything that happens afterward."

Reese listened in silence. "We're concerned with scientific research here," he explained apologetically. "Not welfare. To . . . to follow your demands would mean the end of everything we've worked for, everything we've hoped—"

Doubletalk, of course. Hitchcock had expected that. He wasn't fooled.

"Everything you've worked for!" he repeated scathingly. "The deliberate suppression of a people as deserving of human rights as you or I! In clear conscience, I cannot stand by and permit this to go on! I shall—"

Reese raised a placating hand. "That is not true," he protested. He actually seemed embarrassed. "You forget, Mr. Hitchcock—they are animals, not people. Their minds are primitive . . . undeveloped."

"That," Hitchcock accused, "is a lie! I have definite proof that they are even more intelligent than men. *Any* men. I say you are deliberately suppressing them because you fear what they could become!"

Gesturing helplessly, Reese said softly, "I have not seen this evidence."

"Another lie!" Hitchcock accused. He shook his fist. "Do you expect me to believe," he stormed, "that one of your men could have this evidence and you did not know of it? The whole idea is preposterous."

"But I *don't* know of it," Reese insisted. He sounded almost reasonable. "What proof? Where did you get it?"

"Your man in charge of intelligence testing showed me some of his records," Hitchcock stated. "And some photographs of brain tissue. They prove conclusively that the floppers . . . that the natives of this planet have minds as good as yours or mine."

Ben Reese was like a man stunned. "I know nothing about this," he protested blankly. "Are you . . . are you sure the evidence really proves that? I mean, perhaps you didn't understand—"

"If Dr. Muller had not helped me," Hitchcock replied, "the evidence would have meant nothing at all."

Reese shook his head. "This is hard to believe," he confessed. "Did he say why he showed you these things?"

"He showed them to me," Hitchcock said, "because I asked him to. He was very co-operative, in spite of his contempt for them, which . . . he made absolutely no attempt to conceal. He said—almost in so many words—that you are doing everything you can to suppress them. He was *proud* of it!"

Reese looked worried. His idle hands, unnoticed, were

nervously tearing notepad paper into progressively smaller and smaller bits. A pile of confetti-sized fragments collected on his blotter.

Hitchcock felt a wonderful exhilaration. He had the man totally helpless.

He was about to rise, repeat his ultimatum, and walk out, when Reese turned to the phone at his elbow, saying, "Excuse me a moment. Please."

Without waiting for a reply, he punched out a number. The phone's light blinked. A voice rasped from the speaker.

"Brains department. Muller speaking."

"Sigurd?" Reese asked. "This is Ben. Would you mind coming down here? Something has come up."

"Yeah? Like what?"

"I'd much rather you came down," Reese said mildly. "It's rather complicated."

Muller made an annoyed sound, but then he said, "I'll come." The phone's light went out.

Reese turned back to Hitchcock. "We'll wait till he gets here," he proposed. "All right?"

Reluctantly, Hitchcock sat back and folded his arms. Scowling, he waited.

This was something he hadn't expected.

Not that it made any difference, of course. Reese was caught in an impossible position. All he could possibly do was try to justify himself.

Hitchcock settled back to wait. He was supremely confident. Just let him try to justify himself. Just let him try!

He could not do it.

6

Ben Reese was deeply troubled. Adam Hitchcock was a well-intentioned fool, and his ability to understand was limited, but Sigurd must have shown him something. Whatever else had happened—whatever else he had been told—Hitchcock must have seen something. Ben Reese tried to imagine what it could have been. He couldn't. He would have to wait. Sigurd Muller would have to explain.

Reese pretended to be busy with his papers. It was all

the excuse he could think of not to talk to Hitchcock while they waited. But he couldn't work. There was a lot that still had to be gone over before the *Wayfarer* went back to Lambda Serpentis, but until Muller came and the matter was settled, he could not put his mind to it.

Then Muller walked in, his pointed beard jutting like a prow. He glanced around quickly, noticed Hitchcock, but didn't even pause. "What's up?" he asked jauntily. He grabbed a chair, whirled it around, and straddled it.

Reese put his papers aside. "Mr. Hitchcock tells me the floppers are intelligent," he explained. "That you showed him proof it."

Muller's eyes shifted from Reese to Hitchcock, then back again. "He did, huh?" he said neutrally.

"This was the first I'd heard of it," Reese said pointedly.

Muller shrugged. "So what?" he said. "If you'd look at the reports I turn in—" He gestured at the papers on the desk.

"I have read your reports," Reese said. "I studied them carefully. You did not mention this development."

"Yeah?" Muller challenged. "Who're you saying that for? Me or him?" He jerked a thumb at Hitchcock.

Reese didn't let himself be steered off. "Do you confirm it?" he persisted.

Muller glanced at Hitchcock again before he answered. "Yeah," he admitted. "There's been a few smart ones turn up."

So it was true! Reese wanted to shout with excitement. "How many?" he asked breathlessly.

"Three," Muller said, holding up fingers. "Three of 'em so smart they scare you. And all from the same country. There's a lot more up there, too—running loose."

"You're sure of that?" Reese asked. It was more than he dared to believe.

"Yeah," Muller said grimly. "There's been a population jump, up there, and everything else has stayed the same. How would you figure it?"

Reese nodded slowly. He sighed. Put together like that, the evidence was good enough—the conclusion was valid. He turned to Hitchcock. "Is this what he told you?"

"Substantially," Hitchcock affirmed.

Reese turned back to Muller. A suspicion had grown in him, ugly and fearful. Now he had to destroy it—or see it confirmed.

"He tells me you showed him test records," he said cautiously. "And photos of brain tissue. Were they authentic?"

"Sure they're authentic," Muller retorted. "You think I'd fake a thing like that? Look—all I did was show him around, and show him how we work, and I answered his questions and let him see everything he wanted to see. You got any objections to that?"

Reese shook his head. "To that? No," he conceded. "But these brain tissue samples—I presume you took them from the different sections of their brains."

"I know how to take specimens," Muller answered defiantly.

Reese felt sick and old. "You killed them," he decided. "All three."

"Right," Muller snapped. He smiled with clenched teeth, fiercely proud of himself.

"Sigurd," Reese said reproachfully, "you've done a terrible thing." He turned to Hitchcock again.

"I wish this hadn't come out while you were here," he confessed. "I can only say that I heard nothing about these intelligent ones until now, and that Sigurd killed them without my knowledge. If I had known, I would have stopped him. He acted against regulations and against our policies. I am grateful to you for exposing him."

Muller shot to his feet, his hands fisted. "Exposing me!" he snarled. "Why you little—"

With an effort, Reese kept his voice even. "You may go now, Sigurd," he said. "I... I suggest that you start packing. You have"—he glanced at the clock—"thirty hours before the ship leaves. If anyone asks, tell them that you resigned, and that I accepted your resignation."

Muller's face turned savage with rage. He hurled the chair out of his way and walked up to the desk until it bumped his knees. "You don't make a goat of me that easy," he threatened through his teeth. He jerked a thumb at Hitchcock. "What about him? You can't shut *him* up.

What are you going to do? Pat him on the head and tell him be good?"

Reese glanced at Hitchcock. There was a firmness of decision on the man's hollow-jowled face—a look of holy purpose about his eyes. As he watched, the man rose to his feet with solemn dignity, a bone-lean figure clad in black.

"You're a very clever man, Mr. Reese," he conceded with gleeful ferocity. "But not clever enough. You cannot deny the things I have seen with my own eyes. Nor can you lay all the blame at the feet of your underlings. What this man has done"—he gestured at Muller—"has no bearing on the fundamental fact that the welfare of this planet's natives has been willfully and shamefully ignored—and that you have refused to do anything about it. If you do not correct this situation at once, I will expose you to every civilized community in the universe!"

"But you don't understand," Reese protested.

"I have not yet finished," Hitchcock snapped. "In addition, if you still refuse, we—my Society for Humane Practices and I—shall do it ourselves. We shall sponsor a public subscription. We shall send food, clothes—all the things these poor people need. As many shiploads as necessary. And we shall see that you and all your scientists are removed from this planet. Your presence here will not be tolerated."

"Have you any idea how much it would cost?" Reese wondered.

"The cost is not important," Hitchcock said. "The public will gladly pay whatever is needed."

Reese conceded the point. The knowledge that he could not win against this man was strong in him. It paralyzed his will. He wished he were a woman, or a child, so he could retreat into the weakness of frustrated tears.

"You've done this sort of thing before, haven't you?" he said bitterly, remembering what he had heard of Hitchcock's doings on other planets.

"I have," Hitchcock confirmed. "I have been very successful at it." He paused, waiting for Reese to speak. Reese said nothing.

"If you have nothing more to say—" he said. He turned toward the door.

Desperately, then, Reese spoke.

"Only this," he said with a firmness he did not feel. Hitchcock turned back and faced him. He tapped a finger on the desk. "I gather from what Sigurd has said that some floppers may be intelligent," he said. He spoke very slowly, deliberately. "Some, but not all. In fact, speaking in terms of the entire planetary population, only a very few are intelligent. All the rest are still animals."

Hitchcock was not impressed. "All of them need our help," he stated. "We cannot and we shall not give it to some and deny it to others, no matter what criterion you propose. I can think of nothing so unthinkable."

"The point I'm trying to make," Reese persisted patiently, "is that . . . that the floppers are in a period of transition. Right now, only some of them are intelligent—only a few. But some day, all of them will be intelligent, because . . . because they are living under arduous conditions, and the intelligent ones are better able to survive—the population increase Sigurd mentioned is evidence of that. So, comparatively speaking, a greater proportion of the intelligent ones will survive to maturity. And the mature ones will tend to live longer than . . . than the ordinary ones—so they will tend to produce more young. It's a perfect example of the natural selection process. But it *won't* happen if we try to help them."

"What?" Hitchcock demanded. "Preposterous!"

"It . . . it's very true," Reese assured him. "You see, if we gave them everything they need, the intelligent ones wouldn't have an advantage over the ordinary ones—they'd all have an equal life-expectancy. And the ordinary ones outnumber the intelligent ones by a fantastic margin, so—even if the intelligence gene-complex is a dominant—the intelligent ones would be absorbed into the race within a few generations. There wouldn't be anything left of them."

Hitchcock appeared to consider the argument, but his face was set stubbornly. Bitterly, Reese wondered if the man understood a thing he'd said.

Then Hitchcock spoke. "Am I to conclude, then," he

said, "that you *want* the natives to suffer? To starve? To . . . to *die*? To battle each other for a scrap of food? Do you admit that this is what you want?"

He had understood part of it, Reese concluded glumly. The ugly part. "I think it is necessary," he had to admit. "I think it is the only way the floppers can advance. Remember, something like this must have happened to our own ancestors. If it hadn't, we would still be mindless brutes."

"Nonsense," Hitchcock snapped. "The fact that our ancestors had no one to help them has nothing to do with it. They would have become men no matter what happened. It was their *destiny* to become men—the same destiny as these poor people, here. Nothing can possibly stand in their way—no man can interfere with destiny. They are suffering and dying because you deliberately neglect their welfare. You have the power to end that suffering and you are morally bound to do it. To refuse, Mr. Reese, is to turn your back on humanity."

Reese sat perfectly still, a feeling of blind hopelessness crushing down on him. "I think," he said slowly. "I think I know why Sigurd helped you so much. He wants to suppress the intelligent ones. Am I right, Sigurd?"

"Sure I want 'em kept down," Muller snapped. "We'd better, if we know what's good for us. You've seen the wild ones—they're a bunch of animals. Nothing they'd like better than to tear a man apart and eat the pieces."

"On the other hand," Reese put in thoughtfully, "the ones here in the outpost are docile."

Muller disparaged the point with a wave of the hand. "They don't count," he claimed. "They're way off the main track. It's the ones on the mainland that count. If we let *them* get smart, there'll be no stopping 'em. They'll hunt us down. *We'll* be the animals! If we don't stop 'em, they'll chase us right out of the universe. Right now, we can stop 'em. Later on it'll be too late. So we'd better get at it. Right now."

He really believed it, Reese realized wonderingly. He meant every word of it.

"Sigurd, I don't agree," Reese said slowly. He hoped he sounded reasonable. "In the first place, we conducted some

personality experiments on them about twenty years ago. We took the offspring of wild floppers and raised them with our tame ones. They developed none of the . . . the blood-thirsty traits of their parents. So I'm sure that this . . . this viciousness we see in them is a characteristic forced on them by their environment."

"Yeah?" Muller scoffed. "But the smart ones aren't growing up here in the dome. They're growing up out there—on the mainland."

Reese nodded. "True," he admitted. "But before they could be any danger to us, they would have to develop a civilization—a technology. And one of the characteristics of a technological civilization is the ability of its people to control their environment. By removing the causes of their viciousness, they would also remove the need for being vicious. Also, I believe they have shown this same viciousness toward each other—to the point of cannibalism. But recently, I understand, some of them have taken to hunting in groups. They have discovered the advantages of co-operation. Don't you think this shows a trend away from . . . from animal savageness? Don't you, Sigurd?"

"You want to take a chance on it?" Muller challenged.

"Taking that chance is the only honorable thing we can do," Reese told him firmly.

"Huh!" Muller snorted. "And how do you think they'll look at us, once they get smart, with us sitting here not doing a thing to help 'em? They'll hate us. They'll hate us like hell!"

Reese hesitated, then shook his head. "No, Sigurd," he decided. "The transition will be a slow, very gradual process. It will be all right to start helping them long before they could become a danger to us. Also, if they do become as intelligent as you say, they will probably understand that they could not have evolved to intelligence if we had tried to help them."

Muller snorted disgustedly. "You're doing a lot of supposing," he said. "Suppose you're wrong? It's the whole future of the human race you're talking about, you know. That's . . . that's *us*!"

Reese nodded. "I know," he admitted placidly. "What-

ever we do—whatever we decide—it will be thousands of years before the consequences come. I rather imagine we'll have been forgotten. That puts a terrible responsibility on us. We must try to do what is right."

"And on that basis you refuse to help them?" Hitchcock demanded. "Mr. Reese, I have never heard such a preposterous—I!"

So all his arguments and efforts at persuasion had failed. Reese slumped in his chair, his arms on the rests. He wondered what to do. Muller's careful half-truths—Hitchcock's stubborn ignorance—together they were too much to fight. He could do nothing. He was helpless. Defeat and frustration wearied him, and he felt a sick pity for all the intelligent floppers who would now never be born.

It wasn't fair. It just wasn't fair.

But he did not say it. Thinking it to himself, he realized how futile it was to speak of fairness to these men. And besides, by what right could he ask for fairness—an ideal—from the real world?

Of course it wasn't fair. Nothing was ever completely fair in the real world, because the real world conformed to the physical laws, not the rules of sportsmanship and fair play. It was a hard, bitter thought to accept, but Ben Reese accepted it. As a scientist, he had to accept it no matter how he felt about it.

And in that recognition, he saw, was the key—the way he could protect the floppers from both these men.

He turned to his phone again. "You will excuse me, won't you?" he requested politely as he punched the number combination. His hand trembled.

Before either Hitchcock or Muller could nod their assent, someone answered the phone. "Clinic," he said.

"Nick?" Reese guessed. "This is Ben. Could you send up a couple of your boys?"

"Sure," the one identified as Nick consented. "But what—?"

"Never mind," Reese said quickly. "Just send them." He broke the connection.

"What's the matter?" Muller wanted to know. "You feel sick?"

Reese ignored the question. "I've changed my mind, Sigurd," he said. "You can stay here."

Muller backed up a step. "Well, now, I don't know," he said warily. He scratched his beard. "I've been here a long time—"

"But, Sigurd," Reese urged. "We're going to need you here—at least for the next year. All the information you've held back—"

"It's in my files," Muller said. "You'll find it, if you want it bad enough." He moved toward the door. "I'm going to pack." In a moment, he was gone.

Reese smiled a complacent smile. "There'll be no room for him in the ship," he confided to no one in particular. He leaned forward. "As for you, Mr. Hitchcock . . . sit down, please. There's one thing more I want to say."

Hitchcock paused uncertainly, then resumed his chair. "Let it never be said," he declared, "that I will not hear all arguments."

Reese nodded, pleased. Everything would be all right if he could keep Hitchcock in his office until the boys came from the clinic. "Mr. Hitchcock," he said, "in a sense, I'm very glad you came."

Hitchcock scowled.

"For one thing," Reese went on, "it was you who . . . who brought out the fact that the floppers are developing intelligence. If you hadn't come, Sigurd might have concealed it for years. Of course, Sigurd was hoping you'd help him to . . . to wipe out the intelligent ones, but that is beside the point."

"Mr. Reese," Hitchcock said sternly. "You cannot convince me that black is white."

"Oh, of course," Reese agreed willingly. "But there are hundreds of shades of gray. The other reason I'm glad you came . . ." He spoke earnestly. "You've forced me to re-examine what we're doing here—to . . . to question the rightness of our doing nothing about the conditions in which the floppers live. It's not an easy thing to be sure of."

"So you admit it!" Hitchcock pounced triumphantly. "You admit—"

Reese silenced him with a gesture. "No," he said firmly,

"I do *not* admit it. I have come to the same conclusions I have always held. But now—because of you—I know *why* it is right."

"Impossible," Hitchcock objected. "It is *not* right."

Ben Reese was very patient with him. He could afford to be patient—it used up time, while the boys from the clinic were coming.

"You're a very moral man, Mr. Hitchcock," he said. "I'd be the first to admit it. But—unfortunately—a high moral sense isn't enough. You see, Nature *isn't* moral—it doesn't conform to our concepts of right and wrong, and it isn't limited to conditions where the right and wrong of a matter are easy to decide. There are times when an act that seems morally right can lead to . . . to something horrible. You cannot say a thing is morally right or wrong until you've considered the context in which it happens. And that, Mr. Hitchcock, is where your moral sense fails you."

"I do not need a scientist to tell me the difference between right and wrong," Hitchcock stated stubbornly.

Reese nodded pleasantly. "I expected you'd say that," he admitted. "But you're wrong. Until you know the consequences of an act, you cannot tell whether or not it is moral. And there are times—such as now—when a layman such as yourself does not understand the forces involved. When that happens, you cannot predict the consequences of an act. Therefore, you cannot decide whether it is right or wrong."

"You're wrong!" Hitchcock insisted. "The end *never* justifies the means! *Never!*"

Reese didn't deny it. He said, reasonably, "On the other hand, there are times when no other test applies—when all the possible courses of action look equally bad. And even when you can do something which seems absolutely right, you still have to think of the consequences. If the consequences are bad, the act itself must be bad. Or suppose there is a . . . a morally imperative goal which you can achieve only by doing things which any moral code would condemn."

Hitchcock was incredulous. "Such a thing could not happen," he objected.

"I am talking," Reese said firmly, "about now. About the situation here. That is the problem we have been dealing with here, ever since this outpost was built—whether to help them—give them comfort and security—and destroy for all time their hope of ever becoming more than animals—or whether we should let nature take its course—allow many to die, and many more to suffer, so that some day their descendants can stand before us as equals."

He shrugged expressively. "We can do only one thing. We must balance the wrong which we know we are doing against the goal we are morally obliged to support. We must go ahead and . . . and try not to let our consciences upset us too much."

"If you must rationalize a thing," Hitchcock stated, "it's wrong. Good does not come from evil!"

Reese shrugged helplessly. "We must do what we think is right," he said practically. "And if our judgments are different from someone else's, we must follow our own. We—"

He broke off as the door opened. Two floppers came in, wheeling a stretcher. Each one had a big red cross dyed in the fur on its chest.

Reese pointed at Hitchcock. "That man is sick."

The floppers advanced, their resilient feet rustling softly on the floor. Hitchcock, taken aback by Reese's abrupt statement, thumbed his chest. "Me?" he wondered incredulously.

The floppers came up, one on each side of him. They grabbed his arms close to the shoulder. Hitchcock yipped with surprise, turned his head, and found the solicitous, repulsive face of a flopper only inches from his own.

With a strangled, terrified cry, he lunged from the chair. The floppers kept him from falling headlong on the floor. Wild-eyed, he struggled to get loose from them, but they held on. He kicked at them desperately. They dragged him backwards. His feet flailed the air.

"Make them let me go!" he begged. "Make these filthy monsters let me go!"

Reese sat back and relaxed. He was sorry he had to do this to the man, but it did somehow give him a pleasant feeling.

It wasn't, after all, as if Hitchcock was a really good man.

"I'm afraid I can't do that," he apologized. "They've been taught to take a sick man to the clinic. I couldn't stop them now if I wanted to." He spread his hands helplessly. "As I've said before, they're rather stupid."

One of the floppers moved behind Hitchcock and held both his arms. The other flopper took an ampule from the pouch on its harness. Hitchcock stared at the shiny needle with the fascination of sheer terror. "Don't let him!" he screamed. "Don't let him! It's murder!"

The flopper peeled Hitchcock's sleeve up and stabbed the needle into the fleshy part of his arm. Hitchcock uttered a faltering cry, shuddered, and sagged.

"Oh, it's only a mild sedative," Reese assured him cheerfully. "We wouldn't dare trust them with anything stronger. But you shouldn't have struggled so much."

Hitchcock hung laxly in the flopper's arms. His eyes had a glassy look. The floppers wrapped a blanket tightly around him. His mouth moved as if he was trying to speak, but no words came out.

"The ship is going to leave without you," Ben Reese said. "I'm sorry about that, because I don't think I'm going to enjoy your company for the next year. We'll tell them . . . I think we'll tell them you're sick. A . . . a local disease—one we don't want to spread on other planets. There aren't any diseases like that, of course, but that doesn't matter."

He was very apologetic about the whole thing.

Hitchcock was making apoplectic noises now. "Outrage! Criminal! I'll have the law on you!" For a man of firm moral fiber, some of his comments were remarkably unprintable.

Ben Reese shrugged. "I'm afraid there isn't any law here," he apologized. "We didn't need any, till you came along. I . . . I'm sorry we have to do this to you, but—well, we can't let you go back to Earth. You'd agitate to have our charter revoked and . . . and then you'd organize this gigantic interstellar aid program, and destroy the floppers' only hope of ever being anything more than animals. We . . . we just can't let you do that."

By this time, Hitchcock was wrapped in the blanket like a mummy. Gently, the floppers lifted him and laid him in

the cradlelike stretcher. "You won't get away with this!" he threatened wrathfully.

The floppers fumbled deftly with the straps, securing him. Their digitless hands were remarkably dexterous. All Hitchcock could move was his head and his mouth.

"Oh, we'll have to let you go next year, of course," Reese admitted. He wasn't disturbed by the thought. "But that is a whole year away. We'll have plenty of time to prepare the public for you. If we give them the whole truth now, I rather doubt they'll be much impressed with your partial truths later on. I'll send instructions about that to our business office on Lambda. Just to announce that the floppers are beginning to evolve should be a good start, and—"

He smiled. He felt wonderful. Perhaps treating Hitchcock this way *was* lousy and unethical, but even Hitchcock himself would have to admit that—when everything was considered—it was definitely a moral act.

The floppers began to wheel Hitchcock out of the room. Hitchcock was raving.

"You can't do this to me!" he protested. "You can't!"

"Really?" Ben Reese wondered innocently. He knew it was cruel, but the temptation was too strong.

"Really, Mr. Hitchcock," he said, "I *must* have proof."

EPILOGUE

Slowly, the procession marched past the bier of the Dead One, who was nameless because he was dead, and who had been their leader. Each one, as he came to the bier, crouched low in obeisance, then moved on. The shaman stood over the bier, his pelt stained green to signify that he personified the Dead One. He acknowledged each obeisance by raising his arms.

Shokk-elorrish stood beside the bier, and he also acknowledged the obeisances, for he was the new leader in the Dead One's stead. Already, he held the tool-stone in his hand, and he chanted the four harsh syllables: "My eyes shall find the path for your feet; my hand shall feed you and my pelt shall warm you; I am all of you; I give you my self."

This he spoke to each one who made obeisance to him, and each one responded: "Show me the path!"

The procession shuffled on, and formed ranks beyond the bier. And when the last one made his obeisance, the three eldest-born from the Dead One's body came forward. They lifted the vine-woven sling which cradled the Dead One. Flanked by Shokk-elorrish on one side and the shaman on the other—all of them chanting: "You are all of us; your eyes saw the path; your hand fed us; your pelt warmed our bodies. We are grateful; we honor you; we sanctify the memory of you; we give you back to yourself!"

Chanting this, their tread matched to the chant, they advanced to the edge of the cliff. There they stopped, and the cadenced rhythm of their chant broke with the cry, "We cast you out!" and they hurled the Dead One into the foaming sea. And the sons of the Dead One and the shaman turned to Shokk-elorrish. They made obeisance to him, and they said: "Show us the path!"

But Shokk-elorrish did not answer, nor did he show them any sign that he heard. Standing at the cliff edge, the wind rippling his pelt and the waves crashing on rocks far below, he faced out to sea and made obeisance to the Olympians who lived on the round mountain, there on the island that rose from the horizon—the Olympians, who never had to migrate in search of new hunting ground, and who watched from the boulder that floated like a cloud in the wind—who watched but took no part in the things they witnessed.

And he wondered, even as he made obeisance to them, why they kept themselves aloof, and what was the source of their powers, and whether his people, too, could achieve those powers—to become the equals of those strange and enigmatic beings.

And he wondered, too, would they teach him? Would they teach him if he went to that mountain—out there in the ocean? Would they permit him to learn the secret of their powers?

He wondered how to cross those tattered waves—how to climb that shore and ascend to the crest of that mountain.

Thinking thus, Shokk-elorrish knew what his path would be. And the path of his people.

Toward greatness. Toward the mastery of Nature.

Toward glory.

HEMINGWAY IN SPACE

by Kingsley Amis

from *Punch*

Last year I took occasion to do considerable sniping at some sins of omission, and a few commissions, in Kingsley Amis's critical book on science fiction, "New Maps of Hell." When my first fine fury began to die down, it occurred to me that my fire might better have been aimed at the general literary reviewers (who took the Amis dicta as a sort of newstyle Holy Writ) than at the author, who never claimed infallibility for himself.

One of Mr. Amis's sharpest criticisms of science fantasy in general was the lack of good humorous writing in the field. From the examples he cited, and those he did not, I suspect we do not always laugh at the same jokes. Not always: at least one exception (and probably several more) appeared in the series of parodies published in *Punch* last year, when that venerable institution of humor announced it had ordered "SF stories in the manner of Jane Austen, Charles Dickens, Anthony Trollope . . ." etc.

Mr. Amis's expertise as a critic of s-f was assigned him by reviewers who did not know the science-fantasy field, but did know, and respect (with cause), the author's reputation as a leading "Angry Young Man" novelist and essayist. His expertise as a writer—in this case a superb parodist—is not the property of the reviewers, but very much his own.

The woman watched him and he made another sweep. There was nothing again but he knew one of them was around. It got so you always knew. After twenty years it got so you always knew when one of them was around.

"Anything?"

"Not yet."

"I thought you could tell just where to find these things.

she said. "I thought we hired you because you could take us straight to one of these things. I thought that was why we hired you."

"Easy now, Martha," the young fellow said. "Nobody can find xeeb where there aren't any xeeb, not even Mr. Hardacre. We'll come across one any minute now."

She moved away from the three of them at the instrument panel and her thighs were arrogant under the tight space jeans. You bitch, Philip Hardacre thought suddenly. You goddam, bored, boring, senseless bitch. He felt sorry for the young fellow. He was a pretty nice fellow and here he was married to this goddam senseless bitch and it looked like he was too afraid of her to tell her to get the hell out although you knew he wanted to.

"I feel him near," the old Martian said, turning the bigger and more grizzled of his two heads toward Philip Hardacre. "We shall see him soon now."

The woman leaned against the ship's side and stared out the port. "I can't think why you have to go hunting these monstrosities. Two days it's been since we left and we could have been in Venusport all that while instead of cooped up in this steel jalopy a couple of light years from civilization. What's so good about getting a xeeb even if you do get one? What does it prove, getting a xeeb?"

"The xeeb is the largest life-form in this part of the galaxy." The young fellow was a school professor or something like that and you could tell it from the way he spoke. "More than that its the only sentient creature living out here in free space and it's ferocious, it's been known to take on a scout ship. It's the toughest damn thing there is. That's it, isn't it?"

"That's part of it," Philip Hardacre said. There was that although there was much more, the freedom out there and the stars against the black and the men small in their suits and afraid and yet not afraid and even the xeeb small in the vastness and the cool joy if the xeeb was a good one.

"He comes," the old Martian said in his whistling tones, his smaller head bent toward the screen. "See, lady."

"I don't want to see," she said, turning her back. It was a deadly insult under the ancient Martian code of honor and

she knew it and Philip Hardacre knew she knew it and there was hate in his throat but there was no time now for hate.

He got up from the panel. There was no doubt about it. An amateur could have taken the blip for an asteroid or another ship but after twenty years you knew immediately. "Suit up," he said. "Spaceside in three minutes."

He helped the young fellow with the helmet and what he had been dreading happened, the Martian had taken out his own suit and was stiffly putting his rear pair of legs into it. He went over to him and put his hand between the two necks in the traditional gesture of appeal. "This is not your hunt, Ghlmu," he said in the archiac Martian courtly tongue.

"I am still strong and he is big and he comes fast."

"I know it, but this is not your hunt. Old ones are hunted more than they hunt."

"All my eyes are straight and all my hands are tight."

"But they are slow and they must be quick. Once they were quick but now they are slow."

"Har-dasha, it is thy comrade who asks thee."

"My blood is yours as in all the years, it is only my thought that must seem cruel, old one. I will hunt without you."

"Hunt well, Har-dasha, then. I await you always," the old creature said, using the ritual formula of acquiescence.

"Are we going to shoot this goddam whale or not?" The woman's voice was shrill. "Or are you and that thing going on whistling at each other all night?"

He turned on her savagely. "You're out of this. You're staying right here where you belong. Put that blaster back on the rack and take off that space-suit and start making food. We'll be back in half an hour."

"Don't you give me orders, you bum. I can shoot as well as any man and you won't stop me."

"Around here I say what everybody does and they do it." Over her shoulder he could see the Martian hanging up his suit and his throat went dry. "If you try to get in that airlock with us we head right back to Venus."

"I'm sorry, Martha, you'll have to do as he says," the young fellow said.

The two big Wyndham-Clarke blasters were ready primed

and he set them both at maximum, while they stood in the airlock and waited for the air to go. Then the outer door slid into the wall and they were out there in the freedom and the vastness and the fear that was not fear. The stars were very cold and it was black between the stars. There were not many stars and the black was vast where there were no stars. The stars and the black together were what gave the freedom. Without the stars or without the black there would not have been the freedom, only the vastness, but with the stars and the black you had the freedom as well as the vastness. The stars were few and the light from them was small and cold and around them there was the black.

He spoke to the young fellow over the suit radio. "Can you see him? Toward that big star with the small companion."

"Where?"

"Look where I'm pointing. He hasn't spotted us yet."

"How does he spot us?"

"Never mind that. Now listen. Each swoop he makes, give him one shot. Just one. Then go forward on your suit jet fast as you can. That confuses him more than lateral movement."

"You told me."

"I'm telling you again. One shot. He homes on your shot. Get ready, he's seen us, he's turning."

The great beautiful phosphorescent shape narrowed as it came head-on to them, then appeared to swell. The xeeb was closing fast, as fast as any he'd known. It was a big, fast xeeb and likely to be a good one. He'd be able to tell for sure after the first swoop. He wanted the xeeb to be a good one for the young fellow's sake. He wanted the young fellow to have a good hunt with a good, big, fast xeeb.

"Fire in about fifteen seconds, then jet," Philip Hardacre said. "And you won't have too long before his next swoop, so be ready."

The xeeb closed and the young fellow's shot arced in. It was too early to be a good shot and it barely flicked the tail end. Philip Hardacre waited as long as he dared and fired toward the hump where the main ganglia were and jetted without waiting to see where he had hit.

It was a good xeeb all right. From the way its phosphorescence had started to pulsate you could tell it had been hit somewhere in the nervous system or what passed for that but within seconds it had turned and begun another great beautiful graceful swoop on the two men. This time the young fellow held his fire a little longer and got in a good shot near the hump and jetted as he had been told. But then the xeeb dropped in the way they did once in a hundred times and xeeb and man were almost on each other. There was nothing for Philip Hardacre to do but empty his Wyndham-Clarke all at once in the hope that the loosing of so much energy would get the xeeb to change its mind and home on him instead. Then he was jetting forward at top speed and calling over the suit radio to make for the ship at once.

"It puffed something at me and I lost my blaster," came the young fellow's voice.

"Make for the ship."

"We won't get there, will we?"

"We can try. You may have damaged him enough with that last shot to slow him down or spoil his sense of direction," Philip Hardacre said. He already knew that it was all over for them. The xeeb was only a few miles above them and beginning to turn for a fresh swoop, moving slower but not slow enough. The ship was above them too in the other direction. This was what you faced every time you hunted xeeb and when it happened at last it was just the end of the hunt and the end of the freedom and the vastness and they would have had to end some time.

There was a long arc of light from the ship and the xeeb was suddenly brighter than ever before for an instant and then the brightness went out and there was nothing there.

The Martian had fallen into a crouching position in the airlock and the third Wyndham-Clarke was still in his pincers. The two men waited for the outer door to close and the air to flood in.

"Why didn't he put on his suit?" said the young fellow.

"There wasn't time. He had about a minute to save us. A Martian suit takes much longer than that to put on."

"What would have got him first, the cold?"

"Airlessness. They respire quickly. Five seconds at most. Just enough to aim and fire." He was quick after all, Philip Hardacre thought.

Inside, the woman was waiting for them. "What happened?"

"He's dead, of course. He got the xeeb."

"Did he have to get himself killed doing it?"

"There was one weapon on board and one place to use it from," Philip Hardacre said. Then his voice went quiet. "Why are you still wearing your space-suit?"

"I wanted to get the feel of it. And you said to take it off."

"Why couldn't you have taken the gun into the airlock?"

Her eyes went dull. "I didn't know how the lock worked."

"But Ghlmu did. He could have operated it from in here. And you can shoot, or so you said."

"I'm sorry."

"Sorry I like," the young fellow said. He didn't sound like a school professor now, or afraid of her. "Sorry brings back that old guy as alive as ever he was, doesn't it? Sorry is about the best I ever heard. And sorry is something else too. Sorry as all hell is how I feel when I drop you off in Venusport and take the shuttle to Earth by myself. You like Venusport, don't you? Well, here's your chance to get lost in it."

Philip Hardacre finished composing the old Martian's limbs and appendages and muttered as much as he knew of the prescribed incantation. "Forgive me," he said.

"Get supper," the young fellow said to the woman. "Right away."

"This was your hunt," Philip Hardacre said to his friend's body.

MINE OWN WAYS

by Richard McKenna

from *Fact & Science Fiction*

Two years ago I had the pleasure of reprinting in this collection Richard McKenna's first published story, "Casey Agonistes." "Mac" was 44 when he sold "Casey." Since then, he has established himself as a science-fantasy writer, made use of his first two careers (cowboy and sailor) in numerous stories and articles in the men's adventure magazines, sold a story to *The Saturday Evening Post*, and is now at work on a novel derived from his own experiences while based at the Navy's China Station.

Walter Cordice was plump and aging and he liked a quiet life. On what he'd thought was the last day of his last field job before retirement to New Zealand, he looked at his wife in the spy screen and was dismayed.

Life had not been at all quiet while he and Leo Brumm and Jim Andries had been building the hyperspace relay on Planet Robadur—they had their wives along and they'd had to live and work hidden under solid rock high on a high mountain. That was because the Robadurians were asymbolic and vulnerable to culture shock, and the Institute of Man, which had jurisdiction over hominid planets, forbade all contact with the natives. Even after they'd built her the lodge in a nearby peak, Martha was bored. Cordice had been glad when he and Andries had gone into Tau rapport with the communications relay unit.

That had been two months of peaceful isolation during which the unit's Tau circuits copied certain neutral patterns in the men to make itself half sentient and capable of electronic telepathy. It was good and quiet. Now they were finished, ready to seal the station and take their pre-taped escape capsule back to Earth; only anthropologists from the Institute of Man would ever visit Robadur again.

And Walter Cordice stood in the wrecked lodge and the picture on the illicit spy screen belted him with dismay.

Robadurians were not symbol users. They simply couldn't have raided the lodge. But the screen showed Martha and Willa Brumm and Allie Andries sitting bound to stakes at a forest edge. Martha's blue dress and tight red curls were unruffled. She sat with her stumpy legs extended primly together and her hard, plump pout said she was grimly not believing what she saw either.

Near a stream, across a green meadow starred yellow with flowers, naked and bearded Robadurians dug a pit with sharp sticks. Others piled dry branches. They were tall fellows, lump-muscled under sparse fur, with low foreheads and muzzle jaws. One, in a devil mask of twigs and feathers, seemed an overseer. Beside Martha, pert, dark little Allie Andries cried quietly. Willa was straining her white arms against the cords. They knew they were in trouble, all right.

Cordice turned from the screen, avoiding the eyes of Leo Brumm and Jim Andries. In their tan coveralls against the silver and scarlet décor they seemed as out of place as the dead Robadurian youth at their feet. Leo's chubby, pleasant face looked stricken. Jim Andries scowled. He was a big, loose-jointed man with bold angular features and black hair. They were young and junior and Cordice knew they were mutely demanding his decision.

Decision. He wouldn't retire at stat-8 now, he'd be lucky to keep stat-7. But he'd just come out of rapport and so far he was clear and the law was clear too, very clear: you minimized culture shock at whatever cost to yourself. But abandon *Martha*? He looked down at the Robadurian youth. The smooth ivory skin was free of blue hair except on the crushed skull. He felt his face burn.

"Our wives bathed him and shaved him and made him a pet?" His voice shook slightly. "Leo . . . Leo . . ."

"My fault, sir. I built 'em the spy screen and went to rescue the boy," Leo said. "I didn't want to disturb you and Jim in rapport." He was a chunky, blond young man and he was quite pale now. "They—well, I take all the blame, sir."

"The Institute of Man will fix blame," Cordice said.

My fault, he thought. For bringing Martha against my better judgment. But Leo's violation of the spy-screen ethic did lead directly to illicit contact and—*this mess!* Leo was young, they'd be lenient with him. All right, his fault. Cordice made his voice crisp.

"We minimize," he said. "Slag the lodge, get over and seal up the station, capsule home to Earth and report this."

Jim really scowled. "I love my wife, Cordice, whatever you think of yours," he said. "I'm getting Allie out of there if I have to culture shock those blue apes to death with a flame jet."

"You'll do what I say, Andries! You and your wife signed a pledge and a waiver, remember?" Cordice tried to stare him down. "The law says she's not worth risking the extinction of a whole species that may someday become human."

"Damn the law, she's worth it to me!" Jim said. "Cordice, those blue apes are human now. How else could they raid up here, kill this boy, carry off the women?" He spat. "We'll drop you to seal the station, keep your hands clean. Leo and I'll get the women."

Cordice dropped his eyes. Damn his insolence! Still . . . Leo could testify Andries forced it . . . he'd still be clear. . . .

"I'll go along, to ensure minimizing," he said. "Under protest—Leo, you're witness to that. But slag this lodge right now!"

Minutes later Leo hovered the flyer outside while Cordice played the flame jet on the rock face. Rock steamed, spilled away, fused and sank into a bubbling, smoking cavity. Under it the dead youth, with his smooth, muscular limbs, was only a smear of carbon. Cordice felt better.

Half an hour later, lower on the same mountain, Leo hovered the flyer above the meadow. The Robadurians all ran wildly into the forest and Jim didn't need to use the flame jet. Leo grounded and the men piled out and Cordice felt his stomach relax. They ran toward the women. Allie Andries was smiling but Martha was shouting something from an angry face. As he stooped to untie Martha the blue horde came back out of the forest. They came yelling and leaping

and slashing with wet, leafy branches and the sharp smell. . . .

Cordice came out of it sick with the awareness that he was tied to a stake like an animal and that it was his life, not his career, he had to save now. He feigned sleep and peered from eye-corners. Martha looked haggard and angry and he dreaded facing her. He couldn't see the others, except Allie Andries and she was smiling faintly—at Jim, no doubt.

Those two kids must escape, Cordice thought.

He must have been unconscious quite a while because sunset flamed in red and gold down-valley and the pit looked finished. It was elliptical, perhaps thirty feet long and three deep. Robadurians were still mounding black earth along the sides and others were piling brush into a circumscribed thicket, roughly triangular. They chattered, but Cordice knew it was only a mood-sharing noise. That was what made it so horrible. They were asymbolic, without speech and prior to good and evil, a natural force like falling water. He couldn't threaten, bribe or even plead. Despite his snub nose and full lips he could present an impressive face—at home on Earth. But not to such as these.

Beside the pit, the devil masker stood like a tall sentry. Abruptly he turned and strode toward Cordice, trailing his wooden spear. Cordice tensed and felt a scream shape itself in him. Then the devil towered lean and muscular above him. He had no little finger on his spear hand. Keen gray eyes peered down through feathers and twigs.

"Cordice, you fool, why did you bring the women?" the devil asked in fluent English. "Now all your lives are forfeit."

The scream collapsed in a grateful gasp. With speech Cordice felt armed again, almost free. But Martha spoke first. "Men need women to inspire them and give them courage!" she said. "Walto! Tell him who you are! Make him let us go!"

Walto meant she was angry. In affection she called him *Wally Toes*. But as usual she was right. He firmed his jowls and turned a cool stat-7 stare on the devil mask.

"Look here, if you know our speech you must know we

never land on a hominid planet," he said pleasantly. "There are plenty of other planets. For technical reasons we had to do a job here. It's done. We have stores and tools to leave behind." He laughed easily. "Take them and let us go. You'll never see another of us."

The devil shook his head. "It's not what we might see, it's what your women have already seen," he said. "They know a holy secret and the god Robadur demands your deaths."

Cordice paled but spoke smoothly. "I and Andries have been out of touch with the others for two months. I don't know any secret. While we were isolated Brumm built the women a spy screen and rescued that boy—"

"Who was forfeit to Robadur. Robadur eats his children."

"Arthur was being *tortured* when he broke free and ran," Martha said. "I saw *you* there!"

"On your strictly unethical spy screen."

"Why not? You're only brute animals with your *things* hanging out!"

The devil pressed his spear to her throat. "Shut up or I'll spear you now!" he said. Martha's eyes blazed defiance.

"No! *Quiet*, Martha!" Cordice choked. His front collapsed. "Brumm did it all. Kill him and let us *go*!" He twisted in his bonds.

Leo spoke from behind. "Yes, I did it. Take me and let them go." His voice was high and shaky too.

"No! Oh please, no!" That was Willa, sobbing.

"Stop that!" Jim Andries roared. "All of us or none! Listen, you behind the feathers, I know your secret. You're a renegade playing god among the asymbolics. But we're here on clearance from the Institute of Man and they'll come looking for us. Your game's up. Let us go and you'll only be charged with causing culture shock."

The devil grounded his spear and cocked his head. Robadurians around the pit stood up to watch. Martha shrilled into the hush. "My own brother is with the Institute of Man!"

"I told you shut up!" The devil slapped her with his spear butt. "I know your brother. Tom Brennan would kill you himself, to keep the secret."

"What secret, Featherface? That you're a god?" Jim asked.

"The secret that man created himself and what man has done, man can do," the devil said. "I'm not Robadur, Andries, but I'm sealed to him from the Institute of Man. The Institute will cover for your deaths. It's done the same on hundreds of other hominid planets, to keep the secret."

"Roland Krebs! *Rollo!* You struck a lady—"

Like a snake striking, the spear leaped to her throat. She strained her head back and said, "Ah . . . ah . . . ah . . ." her face suddenly white and her eyes unbelieving.

"Don't hurt her!" Cordice screamed. "We'll *swear* to forget, if you let us go!"

The devil withdrew his spear and laughed. "Swear on what, Cordice? Your honor? Your soul?" He spat. "What man has done, man can undo. You're the living proof!"

"We'll swear by Robadur," Cordice pleaded.

The devil looked off into the sunset. "You know, you might. You just might," he said thoughtfully. "We seal a class of boys to Light Robadur tonight; you could go with them." He turned back. "You're the leader, Andries. What about it?"

"What's it amount to?" Jim asked.

"It's a ritual that turns animals into humans," the devil said. "There are certain ordeals to eliminate the animals. If you're really men you'll be all right."

"What about the women?" Jim's voice was edgy.

"They have no souls. Robadur will hold you to account for them."

"You have great faith in Robadur," Jim said.

"Not faith, Andries, a scientist's knowledge as hard as your own," the devil said. "If you put a Robadurian into a barbering machine he wouldn't need faith to get a haircut. Well, a living ritual is a kind of psychic machine. You'll see."

"All right, we agree," Jim said. "But we'll want our wives unhurt. Understand that, Featherface?"

The devil didn't answer. He shouted and natives swarmed around the stakes. Hands untied Cordice and jerked him erect and his heart was pounding so hard he felt dizzy.

"Don't let them hurt you, Wally Toes!"

Fleeting in Martha's shattered face he saw the ghost of the girl he had married thirty years ago. She had a touch of the living beauty that lighted the face Allie Andries turned on Jim. Cordice said good-by to the ghost, numb with fear.

Cordice slogged up the dark ravine like a wounded bull. He knew the priests chasing him would spear him like the hunted animal he was unless he reached sanctuary by a sacred pool somewhere ahead. Long since Jim and Leo and the terrified Robadurian youths had gone ahead of him. Stones cut his feet and thorns ripped his skin. Leo and Jim were to blame and they were young and they'd live. He was innocent and he was old and he'd die. Not fair. Let them die too. His lungs flamed with agony and at the base of a steep cascade his knees gave way.

Die here. Not fair. He heard the priests coming and his back muscles crawled with terror. Die fighting. He scrambled in the water for a stone. Face to the spears. He cringed lower.

Jim and Leo came back down the cascade and helped him up it. "Find your guts, Cordice!" Jim said. They jerked him along, panting and swearing, until the ravine widened to make a still pool under a towering rock crowned red with the last of sunset. Twenty-odd Robadurian youths huddled whimpering on a stony slope at left. Then priests came roaring and after that Cordice took it in flashes.

He had a guardian devil, a monstrous priest with clay in white bars across his chest. White Bar and others drove him up the slope, threw him spreadeagled on his back, and staked down his wrists and ankles with wisps of grass. They placed a pebble on his chest. He tried to remember that these were symbolic restraints and that White Bar would kill him if he broke the grass or dislodged the pebble. Downslope a native boy screamed and broke his bonds and priests smashed his skull. Cordice shuddered and lay very quiet. But when they pushed the thorn in front of his left Achilles tendon he gasped and drew up his leg. The pebble tumbled off and White Bar's club crashed down beside his head and he died.

He woke aching and cold under starlight and knew he

had only fainted. White Bar sat shadowy beside him on an outcrop, club across hairy knees. Downslope the native boys sang a quavering tone song without formed words. They were mood-sharing, expressing sorrow and fearful wonder. I could almost sing with them, Cordice thought. The pebble was on his chest again and he could feel the grass at his wrists and ankles. A stone dug into his back and he shifted position very carefully so as not to disturb the symbols. Nearby but not in view Jim and Leo began to talk in low voices.

Damn them, Cordice thought. They'll live and I'll die. I'm dying now. Why suffer pain and indignity and die anyway? I'll just sit up and let White Bar end it for me. But first—

"Leo," he said.

"Mr. Cordice! Thank heaven! We thought—how do you feel, sir?"

"Bad. Leo—wanted to say—a fine job here. Your name's in for stat-3. Wanted to say—this all my fault. Sorry.

"No, sir," Leo said. "You were in rapport, how could you—"

"Before that. When I let Martha come and so couldn't make you juniors leave your wives behind." Cordice paused. "I owe—Martha made me, in a way, Leo."

Her pride, he thought. Her finer feelings. Her instant certainty of rightness that bolstered his own moral indecision. So she ruled him.

"I know," Leo said. "Willa's proud and ambitious for me, too."

Martha worked on Willa, Cordice thought. Hinted she could help Leo's career. So she got her spy screen. Well, he *had* been grading Leo much higher than Jim. Martha didn't like Allie's and Jim's attitude.

"I'm going to die, boys," Cordice said. "Will you forgive me?"

"No," Jim said. "You're woman-whipped to a helpless nothing, Cordice. Forgive yourself, if you can."

"Look here, Andries, I'll remember that," Cordice said.

"I'm taking Allie to a frontier planet," Jim said. "We'll never see a hairless slug like you again."

Leo murmured a protest. I'll live just to get even with

Andries, Cordice thought. Damn his insolence! His heel throbbed and the stone still gouged his short ribs. He shifted carefully and it felt better. He hummed the native boys' song deep in his throat and that helped too. He began to doze. If I live I'll grow my body hair again, he thought. At least the pubic hair.

Jim's voice woke him: *Cordice! Lie quiet, now!* He opened his eyes to hairy legs all around him and toothed beast faces in torchlight roaring a song and White Bar with club poised trembling-ready and no little finger on his right hand. The song roared over Cordice like thunder and sparks like tongues of fire rained down to sear his body. He whimpered and twitched but did not dislodge the stone on his chest. The party moved on. Downslope a boy screamed and club thuds silenced him. And again, and Cordice felt sorry for the boys.

"Damn it all, that really hurt!" Jim said.

"This was the ordeal that boy Arthur failed, only he got away," Leo said. "Mrs. Cordice kept him on the screen until I could rescue him."

"How'd he act?" Jim asked.

"Trusted me, right off. Willa said he was very affectionate and they taught him all kinds of tricks. But never speech—he got wild when they tried to make him talk, Willa told me."

I'm affectionate. I know all kinds of tricks, Cordice thought. Downslope the torches went out and the priests were singing with the boys. White Bar, seated again beside Cordice on the outcrop, sang softly too. It was a new song of formed words and it disturbed Cordice. Then he heard footsteps behind his head and Jim spoke harshly.

"Hello, Featherface, we're still around," Jim said. "Mrs. Cordice called you a name. *Krebs*, wasn't it? Just who in hell are you?"

"Roland Krebs. I'm an anthropologist," the devil's voice said. "I almost married Martha once, but she began calling me *Rollio* just in time."

That guy? Cordice opened his mouth, then closed it. Damn him. He'd pretend a faint, try not to hear.

"You can't share the next phase of the ritual and it's your

great loss," Krebs said. "Now each boy is learning the name that he will claim for his own in the last phase, if he survives. The men have a crude language and the boys long ago picked up the words like parrots. Now, as they sing with the priests, the words come alive in them."

"How do you mean?" Jim asked.

"Just that. The words assort together and for the first time *mean*. That's the Robadurian creation myth they're singing." Krebs lowered his voice. "They're not here now like you are, Andries. They're present in the immediacy of all their senses at the primal creation of their human world."

"Our loss? Yes . . . our great loss." Jim sounded bemused.

"Yes. For a long time words have been only a sickness in our kind," Krebs said. "But ideas can still assort and mean. Take this thought: we've found hominids on thousands of planets, but none more than barely entered on the symbol-using stage. Paleontology proves native hominids have been stuck on the threshold of evolving human minds for as long as two hundred million years. But on Earth our own symbol-using minds evolved in about three hundred thousand years."

"Does mind evolve?" Jim asked softly.

"Brain evolves, like fins change to feet," Krebs said. "The hominids can't evolve a central nervous system adequate for symbols. But on Earth, in no time at all, something worked a structural change in one animal's central nervous system greater than the gross, outward change from reptile to mammal."

"I'm an engineer," Jim said. "The zoologists know what worked it."

"Zoologists always felt natural selection couldn't have worked it so fast," Krebs said. "What we've learned on the hominid planets proves it can't. Natural selection might take half a billion years. *Our* fathers took a short cut."

"All right," Jim said. "All right. Our fathers were their own selective factor, in rituals like this one. They were animals and they bred themselves into men. Is that what you want me to say?"

"I want you to feel a little of what the boys feel now,"

Krebs said. "Yes. Our fathers invented ritual as an artificial extension of instinct. They invented a ritual to detect and conserve all mutations in a human direction and eliminate regressions toward the animal norm. They devised ordeals in which normal animal-instinctive behavior meant death and only those able to sin against instinct could survive to be human and father the next generation." His voice shook slightly. "Think on that, Andries! Human and animal brothers born of the same mother and the animals killed at puberty when they failed certain ordeals only human minds could bear."

"Yes. Our secret. Our *real* secret." Jim's voice shook too. "Cain killing Abel through ten thousand generations. That created *me*."

Cordice shivered and the rock gouged his short ribs.

"Dark Robadur's sin is Light Robadur's grace and the two are one," Krebs said. "You know, the Institute has made a science of myth. Dark Robadur is the species personality, instinct personified. Light Robadur is the human potential of these people. He binds Dark Robadur with symbols and coerces him with ritual. He does it in love, to make his people human."

"In love and fear and pain and death," Jim said.

"In pain and death. Those who died tonight were animals. Those who die tomorrow will be failed humans who know they die," Krebs said. "But hear their song."

"I hear it. I know how they feel and thank you for that, Krebs," Jim said. "And it's only the boys?"

"Yes. The girls will get half their chromosomes from their fathers. They will get all the effect of the selection except that portion on the peculiarly male Y-chromosome," Krebs said. "They will remain without guilt, sealed to Dark Robadur. It will make a psychic difference."

"Ah. And you Institute people *start* these rituals on the hominid planets, make them self-continuing, like kindling a fire already laid," Jim said slowly. "Culture shock is a lie."

"It's no lie, but it does make a useful smoke screen."

"Ah. Krebs, thank you. Krebs—" Jim lowered his voice and Cordice strained to hear. "—would you say Light Robadur might be a *transhuman* potential?"

"I hope he may go on to become so," Krebs said. "Now you know the full measure of our treason. And now I'll leave you."

His footsteps died away. Leo spoke for the first time.

"Jim, I'm scared. I don't like this. Is this ritual going to make *us* transhuman? What does that mean?"

"We can't know. Would you ask an ape what *human* means?" Jim said. "Our fathers bred themselves through a difference in kind. Then they stopped, but they didn't have to. I hope one of these hominid planets will breed on through the human to another difference in kind." He laughed. "That possibility is the secret we have to keep."

"I don't like it. I don't want to be transhuman," Leo said, "Mr. Cordice! Mr. Cordice, what do you think?"

Cordice didn't answer. Why let that damned Andries insult him again? Besides, he didn't know what to think.

"He's fainted or dead, poor fat old bastard," Jim said.

"Leo, all this ritual is doing to you is forcing you to prove your human manhood, just like the boys have to. We have our manhood now only by accident of fertilization."

"I don't like it," Leo said. "That transhuman stuff. It's . . . immoral."

"It's a hundred thousand years away yet," Jim said. "But I like it. What I don't like is to think that the history of galactic life is going to head up and halt forever in the likes of old Wally Toes there."

"He's not so bad," Leo said. "I hope he's still alive."

I am, God damn you both! Cordice thought. They stopped talking.

Downslope the priest voices faded and the boys sang their worded creation song alone. White Bar went away. The sky paled above the great rock and bright planets climbed to view. Cordice felt feverish. He lapsed into a half-dream.

He saw a fanned network of golden lines. Nodes thickened to become fish, lizards and men. A voice whispered: *All life is a continuum in time. Son to father, the germ worldline runs back unbroken to the primordial ocean. For you life bowed to sex and death. For you it gasped sharp air with feeble lungs. For you it bore the pain of gravity*

in bones too weak to bear it. Ten thousand of your hairy fathers, each in his turn, won through this test of pain and terror to make you a man.

Why?

I don't know why.

Are you a man?

What is a man? I'm a man by definition. By natural right. By accident of fertilization. What else is a man?

Two billion years beat against you like surf, Walter Cordice. The twenty thousand fists of your hairy fathers thunder on you as a door. Open the way or be shattered.

I don't know the way. I lost the way.

Through dream mists he fled his hairy fathers. But they in him preserved intact the dry wisps that bound him terribly with the tensile strength of meaning. They steadied the pebble that crushed him under the mountain-weight of symbol. All the time he knew it.

By noon of the clouded day thirst was the greater agony. Cordice scarcely heard the popping noises made by the insects that fed on his crusted blood and serum. But he heard every plash and ripple of the priest-guarded water downslope. Heard too, once and again, the death of boys whose animal thirst overpowered their precarious new bondage to the symbol. Only those who can remember what the grass wisps *mean* survive, Cordice thought. Poor damned kids! To be able to suffer and sin against instinct is to live and be human.

Jim's and Leo's voices faded in and out of his fever dreams. His back was numb now, where the rock dug into it.

Rose of sunset crowned the great rock above the pool when White Bar prodded Cordice downslope with his club. Cordice limped and rubbed his back and every joint and muscle of his misused body ached and clamored for water. Jim and Leo looked well. Cordice scowled silence at their greetings. I'll die without their damned pity, he thought. He moved apart from them into the group of native boys standing by the rock-edged pool. Their thin lips twitched and their flat nostrils flared and snuffled at the water smell. Cordice snuffled too. He saw Krebs, still masked in twigs

and feathers, come through the rank of priests and talk to Jim. "You'll all be thrown into the water, Andries. For the boys, Dark Robadur must swim the body to the bank or they drown. Light Robadur must prevent the body from drinking or they get clubbed. The two must co-act. Understand?"

Jim nodded and Krebs turned back to the priests. These kids can't do it, Cordice thought. I can't myself. He shook the arm of the boy beside him and looked into the frightened brown eyes. *Don't drink*, he tried to say, but his throat was too gummed for speech. He smiled and nodded and pinched his lips together with his fingers. The boy smiled and pinched his own lips. Then all the boys were doing it. Cordice felt a strange feeling wash through him. It was like love. It was as if they were all his children.

Then wetness cooled his body and splashed his face. He dog paddled and bit his tongue to keep from gulping. White Bar jerked him up the bank again and behind him he heard the terrible cries and the club thuds. Tears stung his eyes.

Then he was limping and tumbling down the dark ravine. At steep places the native youths held his arms and helped him. They came through screening willows and he saw a fire near the brush-walled pit. The three women stood there. They looked all right. Cordice went with the boys toward the pit.

"Wally Toes! Don't let them hurt you!" Martha cried.

"Shut up!" Cordice yelled. The yell tore his gummed throat.

The boys faced outward and danced in a circle around the pit. The priests danced the opposite way in a larger circle and faced inward. There was ten feet of annular space between the rings. The priests howled and flung their arms. Cordice was very tired. His heel hurt and his back felt humped. Each time they passed, White Bar howled and pointed at him. He saw Martha every time he passed the fire-lit area. A priest jumped across and pulled the boy next to Cordice into the space between the rings. Cordice had to dance on away, but he heard screams and club thuds. When he came around again he saw them toss a limp body between the dancers into the pit.

They took more boys and made them kneel and did something to them. If the boys couldn't stand it, they killed them. Even if they did stand it, the priests threw them afterward into the pit. I've got to stand it, Cordice thought. If I don't, they'll kill me. Then White Bar howled and leaped and had him.

Threw him to his knees.

Held his right hand on a flat stone.

Pulled aside the little finger.

Bruising it off with a fist axel Can't STAND it!

Outrage exploded in screaming pain. Hidden strength leaped roaring to almost-action. Then his hairy fathers came and made him be quiet and he stood it. White Bar chewed through the tendons with his teeth and when the finger was off and the stump seared with an ember the priests threw Cordice into the pit.

He felt other bodies thump beside him and his hairy fathers came very near. All around him they grinned and whispered: *You ARE a man. Your way is open.* He felt good, sure and peaceful and strong in a way he had never felt before. He wanted to hold the feeling and he tried not to hear Jim's voice calling him for fear he would lose it. But he had to, so he opened his eyes and got to his feet. Leo and Jim grinned at him.

"I knew you'd make it, old timer, and I'm glad," Jim said.

Cordice still had the feeling. He grinned and clasped bloody hands with his friends. All around the pit above their heads the piled brush crackled and leaped redly with flame.

Beyond the fire the priests began singing and Cordice could see them dancing in fantastic leaps. The living native boys struggled free of the dead ones and stood up. He counted fourteen. Smoke blew across the pit and the air was thick and suffocating. It was very hot and they all kept coughing and shifting and turning.

Outside the singing stopped and someone shouted a word. One native boy raised his arms and hunted back and forth along the pit edge. He went close and recoiled again.

"They called his name," Jim said. "Now he has to go

through the fire to claim it. Now he has to break Dark Robadur's most holy *Thou shalt not*."

Again the shout. Twice the boy stepped up and twice recoiled. His eyes rolled and he looked at Cordice without seeing him. His face was wild with animal fire-fear.

Leo was crying. "They can't see out there. Let's push him up," he said.

"No," Cordice said. He felt a Presence over the pit. It was anxious and sorrowful. It was familiar and strange and expected and very right. His hairy fathers were no part of it, but they greeted it and spoke through him.

"Robadur, Robadur, give him strength to pass," Cordice prayed.

A third shout. The boy went up and through the flame in one great leap. Vast, world-lifting joy swirled and thundered through the Presence.

"Jim, do you feel it?" Cordice asked.

"I feel it," Jim said. He was crying too.

The next boy tried and fell back. He stood rigid in the silence after the third shout. It was a terrible silence. His hair was singed off and his face was blackened and his lips were skinned back over strong white teeth. His eyes stared and they were not human now and they were very sad.

"I've got to help him," Leo said.

Jim and Cordice held Leo back. The boy dropped suddenly to all fours. He burrowed under the dead boys who didn't have names either. Vast sorrow infolded and dropped through the Presence. Cordice wept.

Boy after boy went through. Their feet knocked a dark gap in the flaming wall. Then the voice called *Walter Cordice!* Cordice went up and through the dark gap and the fire was almost gone there and it was easy.

He went directly to Martha. All her bright hardness and pout was gone and she wore the ghost face. It gleamed as softly radiant as the face of little Allie Andries, who still waited for Jim. Cordice drew Martha off into the shadows and they held each other without talking in words. They watched as the others came out and then priests used long poles to push the flaming wall into the pit. They watched the fire die down and they didn't talk and the dancers went away

and Cordice felt the Presence go away too, insensibly. But something was left.

"I love you, Martha," he said.

They both knew he had the power to say that word and the right to have a woman.

Then another long time and when he looked up again the flyer was there. Willa and Allie stood beside it in dim firelight and Krebs was coming toward him.

"Come along, Cordice, I'll dress that hand for you," Krebs said.

"I'll wait by the fire, Walter," Martha said.

Cordice followed Krebs into the forest. His nervous strength was leaving him and his legs felt rubbery. He hurt all over and he needed water, but he still felt good. They came to where light gleamed through a hut of interlaced branches. Leo and Jim were already dressed and standing inside by a rough table and chest. Almost at once the plastigel soothed Cordice's cuts and blisters. He dressed and drank sparingly from the cup of water Jim handed him.

"Well, men—" he said. They all laughed.

Krebs was pulling away the twigs and feathers of his mask. Under it he had the same prognathous face as the Robadurian priests. It wasn't ugly at all.

"Cordice, I suppose you know they can regenerate that finger for you back on Earth," he said. He combed three fingers through his beard. "Biofield therapists work wonders, these days."

"I won't bother," Cordice said. "When do we swear our oath? I can swear now."

"No need." Krebs said. "You're sealed to Robadur now. You'll keep the secret."

"I would have anyway," Jim said.

Krebs nodded. "Yes, you were always a man."

They shook hands around and said good-by. Cordice led the way to the flyer. He walked hard on his left heel to feel the pain and he knew that it is no small thing, to be a man.

OLD HUNDREDTH

by Brian W. Aldiss

from *New Worlds Science Fiction*

In November, last year, the oldest British science-fiction magazine celebrated its 100th issue with an imposing array of stories contributed almost entirely by members of the group of young writers which has grown up around *New Worlds* and its sister magazine, *Science Fantasy*, under the editorial guidance of editor-agent-publisher-reviewer E. J. Carnell.

Some of the group now closely associated with the *Nova* publications were active in s-f before the emergence of *New Worlds*, and have been widely published in this country. These include such names as John Wyndham, J. T. McIntosh, and John Christopher. Others have become familiar to American readers in the last few years, partly at least through Carnell's energetic efforts to effect a mutual exchange of material. John Brunner, Kenneth Bulmer, and John Rackham are among these; as are Brian Aldiss, E. C. Tubb, and J. G. Ballard—all of whom appeared in earlier editions of this anthology when they were little or not at all known in this country. There are at least a half dozen more whose names—I hope—we will be seeing more of here before long: writers of sustained quality, with ideas that are often fresher and more stimulating than most of what currently appears on the home scene. (Colin Kapp, John Kippax, Philip E. High, Robert Presslie, James White, Clifford C. Reed... for instance.)

"Old Hundredth" was written specifically for the anniversary issue of *NW*—a story of the remote future when "We" are all "Others," and all "Others" are "We."

The road climbed dustily between trees as symmetrical as umbrellas. Its meandering length was punctuated at one point by a musiccolumn standing on the sandy verge. From a distance, the column could only be seen, and that but faintly. As sentient creatures neared it, their psyches activated it,

it drew on their vitalities, and then it could be heard as well. As they neared, it flowered into pleasant noise, instrumental or chant.

All this region was called Ghinomon, for nobody lived here any more, not even the odd hermit Impure. Only a few wild goats activated the musiccolumn nowadays, or a scampering vole wrung a brief chord from it in passing.

When old Dandi Lashadusa came riding down that dusty road on her baluchitherium, the column began to intone. It was just an indigo stain in the air, hardly visible, for it represented only a bonded pattern of music locked into the fabric of that particular area of space. It was also a transsubstantio-spatial shrine, the eternal part of a being that had dematerialized itself into music.

"Gently, Lass," Dandi told her mare, savoring the growth of chords that increased in volume as she approached. Her long nose twitched with pleasure as if she could smell the melody.

Obediently, the baluchitherium slowed, turned aside to crop fern, although it kept one eye on the indigo stain. It liked things to have being or not to have being; these half-and-half objects disturbed it, though they could not impair its immense appetite.

Dandi climbed down her ladder on to the ground, glad to feel the ancient dust under her feet. She smoothed her hair and stretched as she listened to the music.

She spoke aloud to her mentor, half the world away, but he was not listening. His mind closed to her thoughts, he muttered an obscure exposition that darkened what it sought to clarify.

"... useless to deny that it is well-nigh impossible to improve anything, however faulty, that has so much tradition behind it. And the origins of your bit of metricism are indeed embedded in such a fearful antiquity that we must needs—"

"Tush, Mentor, come out of your black box and forget your hatred of my 'metricism' a moment," Dandi Lashadusa said, cutting her thought into his. "Listen to the bit of 'metricism' I've found here, look at where I've come to, let your argument rest."

She turned her eyes about, scanning the tawny rocks near at hand, the brown line of the road, the distant black and white magnificence of ancient Oldorajo's town, doing this all for him, tiresome old fellow. Her mentor was blind, never left his cell in Beterbroe to go further than the sandy courtyard, hadn't physically left that green cathedral pile for over a century. Womanlike, she thought he needed change. Soul, how he rambled on!! Even now, he was managing to ignore her and refute her.

"...for consider, Lashadusa woman, nobody can be found to father it. Nobody wrought or thought it, phrases of it merely *came* together. Even the old nations of men could not own it. None of them knew who composed it. An element here from a Spanish pavan, an influence there of a French psalm tune, a flavor here of early English carol, a savor there of later German chorale. Nor are the faults of your bit of metricism confined to bastardy. . . ."

"Stay in your black box then, if you won't see or listen," Dandi said. She could not get into his mind; it was the Mentor's privilege to lodge in her mind, and in the minds of those few other wards he had, scattered round Earth. Only the mentors had the power of being in another's mind—which made them rather tiring on occasions like this, when they would not get out of it. For over seventy years, Dandi's mentor had been persuading her to die into a dirge of his choosing (and composing). Let her die, yes, let her transubstantio-spatialize herself a thousand times! His quarrel was not with her decision but her taste, which he considered execrable.

Leaving the baluchitherium to crop, Dandi walked away from the musicolumn toward a hillock. Still fed by her steed's psyche, the column continued to play. Its music was of a simplicity, with a dominant-tonic recurrent bass part suggesting pessimism. To Dandi, a savant in musicolumnology, it yielded other data. She could tell to within a few years when its founder had died and also what kind of a creature, generally speaking, he had been.

Climbing the hillock, Dandi looked about. To the south

where the road led were low hills, lilac in the poor light. There lay her home. At last she was returning, after wanderings covering half a century and most of the globe.

Apart from the blind beauty of Oldorajo's town lying to the west, there was only one landmark she recognized. That was the Involute. It seemed to hang irridial above the ground a few leagues on; just to look on it made her feel she must at once get nearer.

Before summoning the baluchitherium, Dandi listened once more to the sounds of the musicolumn, making sure she had them fixed in her head. The pity was her old fool wise man would not share it. She could still feel his sulks floating like sediment through his mind.

"Are you listening now, Mentor?"

"Eh? An interesting point is that back in 1556 by the old pre-Involuntary calendar your same little tune may be discovered lurking in Knox's Anglo-Genevan Psalter, where it espoused the cause of the third psalm—"

"You dreary old fish! Wake yourself! How can you criticize my intended way of dying when you have such a fustian way of living?"

This time he heard her words. So close did he seem that his peevish pinching at the bridge of his snuffy old nose tickled hers too.

"What are you doing *now*, Dandi?" he inquired.

"If you had been listening, you'd know. Here's where I am, on the last Ghinomom plain before Crotheria and home." She swept the landscape again and he took it in, drank it almost greedily. Many mentors went blind early in life shut in their monastic underwater life; their most effective visions were conducted through the eyes of their wards.

His view of what she saw enriched hers. He knew the history, the myth behind this forsaken land. He could stock the tired old landscape with pageantry, delighting her and surprising her. Back and forward he went, flicking her pictures; the Youdicans, the Lombards, the ExEuropa Emissary, the Grites, the Risorgimento, the Involuters—and catch-words, costumes, customs, courtesans, pelted briefly through

Dandi Lashadusa's mind. Ah, she thought admiringly, who could truly live without these priestly, beastly, erudite, erratic mentors?

"Erratic?" he inquired, snatching at her lick of thought. "A thousand years I live, for all that time to absent myself from the world, to eat mashed fish here with my brothers, learning history, studying rapport, sleeping with my bones on stones—a humble being, a being in a million, a mentor in a myriad, and your standards of judgment are so mundane you find no stronger label for me than erratic? Fie, Lashadusa, bother me no more for fifty years!"

The words nattered and squeaked in her head as if she spoke herself. She felt his old chops work phantomlike in hers, and half in anger, half in laughter, called aloud, "I'll be dead by then!"

He snicked back hot and holy to reply, "And another thing about your footloose swan song—in Marot and Beza's Genevan Psalter of 1551, Old Time, it was musical midwife to the one hundred and thirty fourth psalm. Like you, it never seemed to settle!" Then he was gone.

"Pooh," Dandi said. She whistled Lass.

Obediently the great rhino-like creature, eighteen feet high at the shoulder, ambled over. The musicolumn died as the mare left it, faded, sank to a whisper, silenced; only the purple stain remained, noiseless, in the lonely air. Lass reached Dandi. Lowering its great Oligocene head, it nuzzled its mistress's hand. She climbed the ladder on to that ridged plateau of back.

They made contentedly toward the Involute, lulled by the simple and intricate feeling of being alive.

Night was settling in now, steady as snow. Hidden behind banks of mist, the sun prepared to set. But Venus was high, a gallant half-crescent four times as big as the Moon had been before the Moon, spiraling further and further from Earth, had shaken off its parent's clutch to go dance round the sun, a second Mercury. Even by that time Venus had been moved by gravito-traction into Earth's orbit, so that the two sister worlds circled each other as they circled the sun.

The stamp of that great event still lay everywhere, its

tokens not only in the crescent in the sky. For Venus laid a strange spell on the hearts of man, and a more penetrating displacement in his genes. Even when its atmosphere was transformed into a muffled breathability, it remained an alien world; against logic, its opportunities, its possibilities, were its own. It shaped men, just as Earth had shaped them.

On Venus, men bred themselves anew.

And they bred the so-called Impures. They bred new plants, new fruits, new creatures—original ones, and duplications of creatures not seen on Earth for eons past. From one line of these familiar strangers Dandi's baluchitherium was descended. So, for that matter, was Dandi.

The huge creature came now to the Involute, or as near as it cared to get. Again it began to crop at thistles, thrusting its nose through dewy spider webs and ground mist.

"Like you I'm a vegetarian," Dandi said, climbing down to the ground. A grove of low fruit trees grew nearby; she reached up into the branches, gathered and ate, before turning to inspect the Involute. Already her spine tingled at the nearness of it; awe, loathing and love made a part-pleasant sensation near her heart.

The Involute was not beautiful. True, its colors changed with the changing light, yet the colors were fish-cold, for they belonged to another universe. Though they reacted to dusk and dawn, Earth had no stronger power over them. They pricked the eyes. Perhaps too they were painful because they were the last signs of materialist man. Even Lass moved uneasily before that ill-defined lattice, the upper limits of which were lost in thickening gloom.

"Don't fear," Dandi said. "There's an explanation for this, old girl." She added sadly, "There's an explanation for everything, if we can find it."

She could feel all the personalities in the Involute. It was a frozen screen of personality. All over the old planet the structures stood, shed their awe on those who were left behind. They were the essence of man. They were man—all that remained of him.

When the first flint, the first shell, was shaped into a weapon, that action shaped man. As he molded and compli-

cated his tools, so they molded and complicated him. He became the first scientific animal. And at last, via information theory and great computers, he gained knowledge of all his parts. He formed the Laws of Integration, which reveal all beings as part of a pattern and show them their part in the pattern. There is only the pattern, the pattern is all the universe, creator and created. For the first time, it became possible to duplicate that pattern artificially; the transubstantio-spatializers were built.

All mankind left their strange hobbies on Earth and Venus and projected themselves in the pattern. Their entire personalities were merged with texture of space itself. Through science, they reached immortality.

It was a one-way passage.

They did not return. Each Involute carried thousands or even millions of people. There they were, not dead, not living. How they exulted or wept in their transubstantiation, nobody left could say. Only this could be said: man had gone, and a great emptiness was fallen over the Earth.

"Your thoughts are heavy, Dandi Lashadusa. Get you home." Her mentor was back in her mind. She caught the feeling of him moving round and round in his coral-formed cell.

"I must think of man," she said.

"Your thoughts mean nothing, do nothing."

"Man created us; I want to consider him in peace."

"He only shaped a stream of life that was always entirely out of his control. Forget him. Get on to your mare and ride home."

"Mentor—"

"Get home, woman. Moping does not become you. I want to hear no more of your swan song, for I've given you my final word on that. Use a theme of your own, not of man's. I've said it a million times and I say it again."

"I wasn't going to mention my music. I was only going to tell you that..."

"What then?" His thought was querulous. She felt his powerful tail tremble, disturbing the quiet water of his cell.

"I don't know..."

"Get home then."

"I'm lonely."

He shot her a picture from another of his wards before leaving her. Dandi had seen this ward before in similar dream-like glimpses. It was a huge mole creature, still boring underground as it had been for the last twenty years. Occasionally it crawled through vast caves; once it swam in a subterranean lake; most of the while it just bored through rock. Its motivations were obscure to Dandi, although her mentor referred to it as "a geologer." Doubtless if the mole was vouchsafed occasional glimpses of Dandi and her musicology, it would find her as baffling. At least the mentor's point was made; loneliness was psychological, not statistical.

Why, a million personalities glittered almost before her eyes!

She mounted the great baluchitherium mare and headed for home. Time and old monuments made glum company.

Twilight now, with just one streak of antique gold left in the sky, Venus sweetly bright, and stars peppering the purple. A fine night for being alive on, particularly with one's last bedtime close at hand.

And yes, for all her mentor said, she was going to turn into that old little piece derived from one of the tunes in the 1540 *Souter Liedekens*, that splendid source of Netherlands folk music. For a moment, Dandi Lashadusa chuckled almost as eruditely as her mentor. The sixteenth century Old Time, with the virtual death of plainsong and virtual birth of the violin, was most interesting to her. Ah, the richness of facts, the texture of man's brief history! Pure joy! Then she remembered herself.

After all, she was only a megatherium, a sloth as big as an elephant, whose kind had been extinct for millions of years until man reconstituted a few of them in the Venusian experiments. Her modifications in the way of fingers and enlarged brain gave her no real qualification to think up to man's level.

Early next morning, they arrived at the ramparts of the town Crotheria where Dandi lived. The ubiquitous goats thronged about them, some no bigger than hedgehogs, some

almost as big as hippos—what madness in his last days provoked man to so many variations on one undistinguished caprine theme?—as Lass and her mistress moved up the last slope and under the archway.

It was good to be back, to push among the trails fringed with bracken, among the palms, oaks, and treeferns. Almost all the town was deeply green and private from the sun, curtained by swaths of Spanish moss. Here and there were houses—caves, pits, crude piles of boulders or even genuine man-type buildings, grand in ruin. Dandi climbed down, walking ahead of her mount, her long hair curling in pleasure. The air was cool with the coo of doves or the occasional bleat of a merino.

As she explored familiar ways, though, disappointment overcame her. Her friends were all away, even the dreamy bison whose wallow lay at the corner of the street where Dandi lived. Only pure animals were here, rooting happily and mindlessly in the lanes, beggars who owned the Earth. The Impures—descendants of the Venusian experimental stock—were all absent from Crotheria.

That was understandable. For obvious reasons, man had increased the abilities of herbivores rather than carnivores. After the Involution, with man gone, these Impures had taken to his towns as they took to his ways, as far as this was possible to their natures. Both Dandi and Lass, and many of the others, consumed massive amounts of vegetable matter every day. Gradually a wider and wider circle of desolation grew about each town (the greenery in the town itself was sacrosanct) forcing a semi-nomadic life on to its vegetarian inhabitants.

This thinning in its turn led to a decline in the birth rate. The travelers grew fewer, the towns greener and emptier; in time they had become little oases of forest studding the grassless plains.

"Rest here, Lass," Dandi said at last, pausing by a bank of brightly flowering cycads. "I'm going into my house."

A giant beech grew before the stone façade of her home, so close that it was hard to determine whether it did not help support the ancient building. A crumbling balcony jut-

ted from the first floor. Reaching up, Dandi seized the balustrade and hauled herself on to the balcony.

This was her normal way of entering her home, for the ground floor was taken over by goats and hogs, just as the second floor had been appropriated by doves and parakeets. Trampling over the greenery self-sown on the balcony, she moved into the front room. Dandi smiled. Here were her old things, the broken furniture on which she liked to sleep, the vision screens on which nothing could be seen, the heavy manuscript books in which, guided by her know-all mentor, she wrote down the outpouring of the musicolumns she had visited all over the world.

She ambled through to the next room.

She paused, her peace of mind suddenly shattered by danger.

A brown bear stood there. One of its heavy hands was clenched over the hilt of a knife.

"I'm no vulgar thief," it said, curling its thick black lips over the syllables. "I am an archaeologist. If this is your place, you must grant me permission to remove the man things. Obviously you have no idea of the worth of some of the equipment here. We bears require it. We must have it."

It came toward her, panting doggy fashion with its jaws open. From under bristling eyebrows gleamed the lust to kill.

Dandi was frightened. Peaceful by nature, she feared the bears above all creatures for their fierceness and their ability to organize. The bears were few; they were the only creatures to show signs of wishing to emulate man's old aggressiveness.

She knew what the bears did. They hurled themselves through the Involutés to increase their power; by penetrating those patterns, they nourished their psychic drive, so the Mentor said. It was forbidden. They were transgressors. They were killers.

"Mentor!" she screamed.

The bear hesitated. As far as he was concerned, the hulking creature before him was merely an obstacle in the way of progress, something to be thrust aside without hate. Killing would be pleasant but irrelevant; more important items

remained to be done. Much of the equipment housed here could be used in the rebuilding of the world, the world of which bears had such high haphazard dreams. Holding the knife threateningly, he moved forward.

The mentor was in Dandi's head, answering her cry, seeing through her eyes, though he had no sight of his own. He scanned the bear and took over her mind instantly, knifing himself into place like a guillotine.

No longer was he a blind old dolphin lurking in one cell of a cathedral pile of coral under tropical seas, atheologer, an inculcator of wisdom into feebler minded beings. He was a killer more savage than the bear, keen to kill anything that might covet the vacant throne once held by men. The mere thought of men could send this mentor into shark-like fury at times.

Caught up in his fury, Dandi found herself advancing. For all the bear's strength, she could vanquish it. In the open, where she could have brought her heavy tail into action, it would have been an easy matter. Here, her weighty forearms must come into play. She felt them lift to her mentor's command as he planned for her to clout the bear to death.

The bear stepped back, awed by an opponent twice its size, suddenly unsure.

She advanced.

"No! Stop!" Dandi cried.

Instead of fighting the bear, she fought her mentor, hating his hate. Her mind twisted, her dim mind full of that steely fishy one, as she blocked his resolution.

"I'm for peace!" she cried.

"Then kill the bear!"

"I'm for peace, not killing!"

She rocked back and forth. When she staggered into a wall, it shook; dust spread in the old room. The mentor's fury was terrible to feel.

"Get out quickly!" Dandi called to the bear.

Hesitating, it started at her. Then it turned and made for the window. For a moment it hung with its shaggy shabby hindquarters in the room. Momentarily she saw it for what it was, an old animal in an old world, without direc-

tion. It jumped. It was gone. Goats blared confusion on its retreat.

"Bitch!" screamed the mentor. Insane with frustration, he hurled Dandi against the doorway with all the force of his mind.

Wood cracked and splintered. The lintel came crashing down. Brick and stone shifted, grumbled, fell. Powdered filth billowed up. With a great roar, one wall collapsed. Dandi struggled to get free. Her house was tumbling about her. It had never been intended to carry so much weight, so many centuries.

She reached the balcony and jumped clumsily to safety, just as the building avalanched in on itself, sending a great cloud of plaster and powdered mortar into the overhanging trees. For a horribly long while the world was full of dust, goat bleats, and panic-stricken parakeets.

Heavily astride her baluchitherium once more, Dandi Lashadusa headed back to the empty region called Ghinomon. She fought her bitterness, trying to urge herself toward resignation.

All she had was destroyed—not that she set store by possessions: that was a man trait. Much more terrible was the knowledge that her mentor had left her forever; she had transgressed too badly to be forgiven this time.

Suddenly she was lonely for his pernickety voice in her head, for the wisdom he fed her, for the scraps of dead knowledge he tossed her—yes, even for the love he gave her. She had never seen him, never could; yet no two beings could have been more intimate.

She missed too those other wards of his she would glimpse no more: the mole creature tunneling in Earth's depths, the seal family that barked with laughter on a desolate coast, a senile gorilla that endlessly collected and classified spiders, an aurochs—seen only once, but then unforgettably—that lived with smaller creatures in an Arctic city it had helped build in the ice.

She was excommunicated.

Well, it was time for her to change, to disintegrate, to transubstantiate into a pattern not of flesh but music. That

discipline at least the mentor had taught and could not take away.

"This will do, Lass," she said.

Her gigantic mount stopped obediently. Lovingly she patted its neck. It was young; it would be free.

Following the dusty trail, she went ahead, alone. Somewhere far off, one bird called. Coming to a mound of boulders, Dandi squatted among gorse, the points of which could not prick through her thick old coat.

Already her selected music poured through her head, already it seemed to loosen the chemical bonds of her being.

Why should she not choose an old human tune? She was an antiquarian. Things that were gone solaced her for things that were to come.

In her dim way, she had always stood out against her mentor's absolute hatred of men. The thing to hate was hatred. Men in their finer moments had risen above hate. Her death psalm was an instance of that—a multiple instance, for it had been fingered and changed over the ages, as the mentor himself insisted, by men of a variety of races, all with their minds directed to worship rather than hate.

Locking herself into thought disciplines, Dandi began to dissolve. Man had needed machines to help him do it, to fit into the Involutés. She was a lesser animal: she could unbutton herself into the humbler shape of a musicolumn. It was just a matter of *rearranging*—and without pain she formed into a pattern that was not a shaggy megatherium body . . . but an indigo column, hardly visible. . . .

Lass for a long while cropped thistle and cacti. Then she ambled forward to seek the hairy creature she fondly—and a little condescendingly—regarded as her equal. But of the sloth there was no sign.

Almost the only landmark was a faint violet-blue die in the air. As the baluchitherium mare approached, a sweet old music grew in volume from the die. It was a music almost as old as the landscape itself and certainly as much traveled, a tune once known to men as The Old Hundredth. And there were voices singing: "All creatures that on Earth do dwell . . ."

BLUES AND BALLAD

by Theodore R. Cogswell and Gordon R. Dickson

Whether or not s-f did (before *Punch*-parodies) lack humor, It is certainly true that its best boffs have seldom seen print. (Or I should have said, type.) Fan magazines are usually mimeographed, and only the official programs of the annual fan conventions are ordinarily transcribed.

These Labor Day weekends are virtually impossible to describe (without, at least, technicolor). But for spontaneous humor, song, skit, verse, quick-trigger emceeing, and sufficiency of the *bon* (*mot* or *vivant*), they would be hard to equal. In their songs, particularly—whether at national, international, or purely neighborly gatherings—s-f-ers in general antedated the recent return to roll-your-own, home-made music. Oddly, the music-story did not appear until recently, but s-f music (both in parody and in original) has been on-scene (behind the scenes) for years.

Herewith, a distinctive part of the tradition of the special world Inside Science Fiction....

RADIATION BLUES

Words by Theodore R. Cogswell—Music: "John Henry" variation



Old H - bomb went off last Tues - day, By the



Sec - ond Chance Sa - loon. There ain't noth - ing left but the



juke box, And it's play - ing a mourn - ful tune, Just keeps on



play - ing ——— Those ra - di - a - tion blues.

I've been drinking since last Wednesday
And I should be getting high,
But the dehydration's got me
And all I am is dry.

Can't get no edge on—got radiation blues.

When the sun went down last evening,
I went walking in the park.
Didn't mind those busted street lights,
I was glowing in the dark,
Just call me glow-worm—got radiation blues.

Had a wake for Jake the barber,
One long drink and one short prayer.
Went and shot himself this morning,
'Cause the whole town lost it's hair.
Came out in handfuls—got radiation blues.

Ain't no use in going no place,
Whole damn world is just like here.
Boss men really fixed us this time,
Think I'll have another beer.
Ain't no use singing those radiation blues.

BLOWUP BLUES

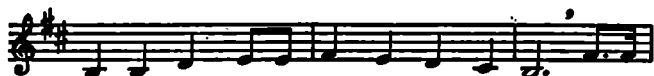
Words and music by Theodore R. Cogswell



"What you gon - na do when you flip the switch and the



lights don't go on, ba - by? What you gon - na do when you



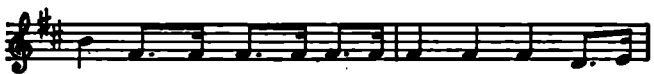
flip the switch, and there ain't no lights at all?" "Why, I'll



buy me some can - dles at the cor - ner store and



set them burn - ing bright - ly. If I



don't feel like go - ing to the cor - ner store, I'll just



pick up the phone and call."

II

"What you gonna do when the gas go off,
And the cook stove don't work, baby?
What you gonna do when the gas go off,
When there ain't no gas no more?"

"Why I'll send me a letter by the postal man,
For my love to take me dining.
Never cared 'bout cooking for myself nohow,
I'll just lock that kitchen door."

III

"What you gonna do when the water go off?
What you gonna drink then, baby?
What you gonna do when the water go off,
And you start a-getting dry?"

"Why I got me a bottle of champagne wine
My true love gave me Sunday.
And when that bottle am all drunk up—
Just set me down and cry."

IV

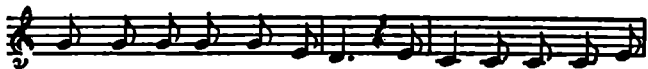
"What you gonna do when the rockets come,
And the whole town blow up, baby?
What you gonna do when the rockets come,
And that trumpet start to blow?"

"Why I'll put on my party dress,
And watch the sky a-falling,
'Cause the Lord's a-waiting for to raise me up,
When it comes my time to go."

BALLAD OF THE SHOSHONU

by Gordon R. Dickson—Music by Gordon R. Dickson

I've gone and mar - ried a Sho - sho-nu.



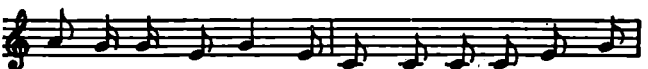
How did it hap - pen to me? I'm sit - ting here with a



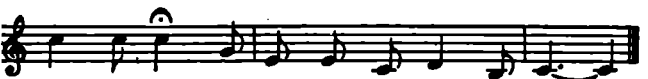
drink in my hand, wor - ried as I can be. I've



got a bar - rel : of whis - key, — but it's



no com - fort to me, 'Cause whar - 'll I do with my



Sho - sho-nu? And what - 'll she do with me? —

I got paid off on Lyra one. I left that deep space boat.
I went downtown to the barrooms there, just to wet my
throat.

The Shoshonu were all around, and one sat down with me.

Oh, what'll I do with my Shoshonu?
And what'll she do with me?

She hadn't moulted her humanoid form; she was pretty as
could be.

She turned her big eyes up to mine, and smiled soulfully.
But she slipped a mickey in my drink, when she got home
with me.

Oh, what'll I do with my Shoshonu?
And what'll she do with me?

When I woke up the wedding was on, and I was saying,
"Yes—"

The High Shoshonu's six-foot fangs two inches from my
vest.

The relatives were all around, they swarmed all over me.

Oh, what'll I do with my Shoshonu?
And what'll she do with me?

Her father gave us a ton of gold; her mother gave us jewels.
The rest of the tribe pitched in on a house, complete with
swimming pools.

They said, "Take care of our little girl—she's about to
moult, you see."

Oh, what'll I do with my Shoshonu?
And what'll she do with me?

So I'm sitting here with a drink in my hand, as worried as
I can be.

When a Shoshonu moults, she turns into a dragon, rough-
el-ly.

It's our wedding night. She's moulting now. And it makes
them hung-ger-ry.

Oh, what'll I do with my Shoshonu?
And what'll—she—do—with—me?

HOW TO THINK A SCIENCE FICTION STORY

by G. Harry Stine

from *Analog Science Fact and Fiction*

In August, 1957, I doubt there were a hundred men and women alive who rationally expected to see a man land on the Moon in their own lifetimes. There were, I should say, a couple of thousand, out of Earth's billions, who honestly believed such a development to be technologically possible, or historically plausible. By January of 1958, the swiftest intellectual revolution in history had occurred. But even then, our best hopes were slower than our best performance.

Dr. I. M. Levitt, director of the famous Fels Planetarium, was one of the few men already accustomed to thinking in terms of the challenge of space. Shortly after Sputnik, in an article in *The New York Times*, he predicted a manned rocket into space by 1968; a station in space by 1980; and a manned trip to the Moon about the year 2000.

Look magazine, in a "Space Timetable" at the start of 1958, did not anticipate the first manned satellite till between 1970 and 1980 (on the basis of pooled scientific opinions); but lowered Dr. Levitt's estimate for the Moon trip, placing it "in the last decade of this century."

G. Harry Stine, a rocket engineer who had been working at White Sands until S (for Sputnik)-Day, when he voiced his opinion of the U.S. space program ("Fat, dumb, and happy," was part of it), was rather more optimistic. He said 1967 for a man in orbit, 1970 for a manned space station.

Two years later—January, 1960—Look magazine printed a new timetable, agreeing with Stine's old guess on the space station, but making him look like a stodgy conservative otherwise: men in orbit by the end of 1961, they said, and the first man to the Moon between 1967 and 1969. But they also said 1963 for the Echo satellite which was launched eight months after the article appeared; and they figured the Soviet Venus probe (January, 1961) for early 1962. Once again these estimates were derived from a composite of best-informed sources.

Ex-rocketman Stine is now working for a research and development company in New York City, where he is closely

associated with Col. William O. Davis, former chief of the USAF Office of Scientific Research. (Stine's "Time for Tom Swift," in *Analog*, January, 1961, some of Davis's ideas on space flight, based on the notion that any practical system of transport must be "suitable for an aged grandmother visiting her grandchildren. . . .") The article that follows is excerpted from a longer essay, "Science Fiction Is Too Conservative."

My full-time legitimate business involves the promotion of scientific innovation, management of scientific research, and synthesis. I don't run a laboratory; I sit with a pencil and paper, I read constantly, and I travel to find out what Dr. Knowsall happens to be doing in a remote corner of his lab. In order to find out what is likely to be significant to my company in the future, I must identify a new area of science or technology early . . . preferably *before* it becomes a real new area and before everyone else knows about it, too. If a new area makes sense in a number of ways, and if everybody else thinks that you are stark raving mad to consider it, it is exactly what the doctor ordered. It's not an easy job; just when you think you have things well under control, the program planned nicely, and the future well in hand, through the door walks someone with something new. And you have to start all over again.

Old training as an s-f writer taught me the value of future trend curves. In order to write a story about the future, one had to have some notion of what the future held in store and in what approximate time period it was likely to take place. This sort of crystal ball gazing is quite useful in research management, particularly when you must sell a screwball concept to management.

Trend curves were probably first considered as a serious aid to research management by the Air Force Office of Scientific Research in 1953. A trend curve is a simple thing to plot. It isn't hard to construct one. It is difficult to do the necessary research to begin with and to interpret the results when you are finished. For a better understanding of this matter of trend extrapolation, let us consider one

of the simplest and most obvious of trend curves: speed.

If we plot the time in years on the abscissa while plotting the speed achieved by manned devices (and/or unmanned devices, too) on the ordinate, we get the simplest and purest sort of trend curve. In 30,000 B.C., a man could make 4 mph walking and about 10 mph running. Plot the point. In about 2000 B.C., he rides a horse at about 30 mph maximum; another point. Get the idea? Then come ships, starting at zero mph for simple rafts in umpteen-hundred B.C. and progressing to about 40 mph in 1800. Then comes the train, starting with the 10 mph of Stevenson's locomotive in 1830 and rising to the 128 mph achieved by the *Pennsylvania Special* in 1905.

There is already something of interest that the trend curve can tell us at this point: each time a new concept of transportation showed up, the speed curve for that device rose sharply and finally leveled off as the practical limit for that device was reached. But, at the same time, each new quantum jump in speed was produced by a new device based on a new concept. This, then, gives the integrated curve a continually increasing slope.

Back to our buttons: The airplane shows up in 1903 flying at a graceful 30 mph. From that point on, speed begins to increase with great rapidity: 200 mph in the 1920's, 500 mph in the late 1930's, Mach 1 in 1947; Mach 2 in 1952. But there the speed of the airplane begins to flatten out. But along comes the ballistic vehicle!

At this point, the curves for unmanned and manned vehicles begins to split. At this time, unmanned vehicles have not only achieved orbital velocity, but escape velocity as well. Manned vehicles should achieve orbital velocity in 1961. Shortly thereafter, much sooner than anyone believes possible, manned vehicles will achieve escape velocity.

The speed trend curve was drawn up by members of the Air Force Office of Scientific Research in 1953 to convince people that space flight was indeed becoming a reality and that the Air Force should get moving. With this curve, USAF officers were able to predict, in 1953, that orbital velocity would be achieved late in 1957 and escape ve-

locity shortly thereafter. Obviously, they were crazy . . . or were they?

Now having a typical trend curve to play with, let's analyze it. Note the shape of the curve. By using linear scales on both the speed and time axis, the curve would appear to be practically flat until a few years ago; and the curve would appear to be exponential. Okay, this means we must transfer it to semi-log paper, graph paper with a linear time scale but a logarithmic speed scale; on this type of graph paper, a true exponential function becomes a straight line. But a trend curve on semi-log paper is *still* an upward-turning exponential! So we must therefore transfer it to a curve with a log scale on speed and a reverse-log scale for time. Even at that, the trend curve *still* turns upward in an exponential fashion!

What does this mean? Just that things are happening much faster than we believe. Most laymen are content to predict the future in terms of a trend curve that levels off from the present ever onward. Scientists, on the other hand, are a bit more radical; they tend to predict the future trend with a curve of constant slope from now on.

A layman can't really predict the future at all; he has no understanding of the forces that are in motion because of accumulated knowledge. Scientists will grudgingly try to predict the future using an extremely conservative estimate—one that has always been wrong. Using a linear trend curve, scientists in 1930 were predicting a controlled nuclear reaction *not before* 2,000 A.D. Obviously too conservative, because a controlled nuclear reaction was achieved ten years later.

Science-fiction writers, myself included, were using a straight exponential trend curve, also a conservative one, and predicted generally that space flight might be achieved around 1975, and that we might land on the Moon or travel to Mars around the turn of the century.

If you really understand trend curves, you can extrapolate them into the future and discover some baffling things. The speed trend curve alone predicts that manned vehicles will be able to achieve near-infinite speeds by 1982, and I would not want to bet that I have not been too conservative

in extrapolating the curve! It may be sooner. But the curve becomes asymptotic by 1982.

The trouble with a trend curve is that it may tell you quite accurately what to expect, but it doesn't tell you how it is going to happen. I have no idea *how* we are going to achieve near-infinite speed (or near-infinite acceleration). The curve simply goes asymptotic.

If this is really the case, a true scientific breakthrough of major importance must be in the offing in the next twenty years. The breakthrough itself will probably be within the next few years. It takes time to go from theory and experimental hardware to practical engineering devices, although the trend curves show that this time cycle is getting shorter all the time, too. We can't know how long the development cycle will be because we have no idea what the concept or theory entails at this time. But, with cybernetic computers, improved management techniques, and the benefit of centuries of accumulated knowledge and technique, you can bet that the development cycle will be much shorter than it was for the airplane or even the ballistic missile.

What does this mean to us as human beings and, especially, to science-fiction editors, writers, readers, and fans? Answer: plenty of entertaining speculation.

Suppose we get a new space drive within the next few years. What will be the consequences? What will be the impact of this upon the world political situation if it is discovered in America? In Russia? In Switzerland? In Spain? What is going to happen to a space exploration program built around rocket engines?

Suppose it is a true anti-gravity machine; what's going to happen to the chief helicopter designer at Offwego Aircraft Company?

This is downright serious stuff, not fantasy, because the trend curve says that something is going to happen. Consideration of all the varied aspects of this is a proper, legitimate, and professed job for science-fiction. It is the only medium of communication by which this can truly be considered in advance. Get busy; something's going to happen damned soon to keep the speed curve rising.

The speed curve isn't the only one that is going up fast.

All trend curves are now rising rapidly, and all of them go asymptotic before 2000 A.D. Here are a few of them, plus some things to think about:

1. Life expectancy is increasing, and this trend curve indicates that anyone born after the year 2000 A.D. lives forever, barring accidents. Recent Russian biological work indicates how this may be achieved, but regardless of the method what are the implications? Should my grandson buy life insurance or accident insurance? In fact, what is going to happen to the life insurance business? How will all of this affect the practice of medicine, and how will the medical arts be changed as a result of the knowledge that permits longevity? Heinlein tackled one aspect of this in "Methuselah's Children," but what are some of the other aspects of the problem? If a man can live for a thousand years, does this make interstellar travel at sub-light speeds practical? And how much can a man learn in a thousand years?

2. Population is rising rapidly, and early in the Twenty-first Century there isn't enough room on the planet Earth for everybody. This curve shows no more signs of leveling off than the other trend curves do, so we cannot take the easy way out via starvation, birth control, or mass destruction, because those things are apparently not in the cards when other trend curves are also considered. Can we export people to other worlds fast enough? Isaac Asimov says we can't, and Dandridge M. Cole says we can . . . and both can back up their arguments with calculations. Or is this curve, in connection with other curves, simply telling us to expect an event of major cosmic significance in the next fifty years? If so, what?

3. Historical cycles are getting shorter. Rome rose and fell in about eight centuries, the lifetimes of many men. The British Empire came apart in a matter of years, not centuries. A cultural cycle today is about twenty years long. Soon, we can expect to see several major cultural changes in one life span. This is probably due to the improvement of rapid communication and transportation devices. All right: what are the effects of this upon the individual human being? How adaptable must a man be to withstand this?

What sort of a successful human being is likely to result from adaptation to rapid cultural change?

4. The trend curve for controllable energy is rising rapidly. The richest baron of feudal times did not control the same amount of energy in his human serfs and slaves as you have at your command beneath the hood of your automobile. The advent of controlled nuclear energy has boosted that curve even more. It is highly probable that controlled fusion has been achieved in the laboratory and will become commercial within a matter of years, thereby kicking the curve up to an even higher level. By 1981, this trend curve shows that a single man will have available under his control the amount of energy equivalent to that generated by the entire sun. To use an energy source, you must have an energy sink; you must have some place to dissipate the energy in performing work. What are we going to do with this much energy? How are we going to use it? How will this alter our way of life? What can we do then that we can't do now because we don't have the energy sources? Unless a man has the proper training, we presently deny him the use of certain forms of packaged high energy such as explosives, nuclear reactors, and high-speed vehicles; what kind of training must a man have before he is allowed to use the energy of a star?

5. The number of circuits in cybernetic devices is increasing on the familiar trend curve. The human brain has an estimated four billion neural circuits. By 1970, computer engineers may have achieved the same number of circuits in a digital computer; they may do this by building one large computer or by slaving many smaller computers together by data links as they have already started to do. The speed of digital computers is quite high, and they are getting faster all the time. What are the logical consequences of this? Will these machines think? Will they repair themselves? Will we finally achieve the ability with these machines to handle problems with extremely large numbers of variables, problems which cannot presently be solved? What problems? Will these machines be used in the manner of Ken Crossen's SOCIAC, or will we put them to work as tools to help us solve the riddles of biochemistry and

psychology? By building complex machines of this type, will we gain a better understanding of our own mental processes, and, if so, what are the consequences? Assume that mankind will not allow itself to be replaced by its own machines, and then consider what steps mankind must take to achieve a dynamic, viable solution to this problem.

6. The amount of knowledge that must be assimilated by our young people before they are equipped to earn a livelihood is also increasing on the super-exponential trend curve along with the curve representing the total accumulated knowledge of the human race. People used to spend only a few years in school learning the three R's. Now, they must spend at least 12 years in school... or 16 and more if they desire to enter a profession. Question: Must we therefore spend more and more of our lives in school, or have we already reached the point where we must both study and work during our entire lives if we are to keep up with our own field of endeavor? What must we do to our educational system to cope with this? This is more serious than the growing shortage of classroom space and teachers, because there will always be a shortage of these two items from now on; we can't catch up. But the amount we must learn continues to increase. What sort of educational system can be designed to cope with this?

All of these trend areas have been touched by science-fiction, mostly in a cursory and incomplete fashion, and mostly by extrapolating a single curve to its ultimate limit without consideration of the other curves. In writing such stories, the authors have allowed one factor to advance while everything else stood still. This isn't the case. *All* the trends are upward, not just one of them, and any yarn based on a single curve without consideration of the others results in an unrealistic extrapolation toward a non-viable future state of affairs. But writers continue to make this mistake, and competent scientists and managers make the same one when they attempt to chart the future on the basis of extrapolation. In research management or science-fiction writing, one must consider every possible factor, weighing each as to its importance and recognizing that there is a time scale involved, too.

In other words, one says to himself that Gadget A is not possible until Metal B is developed. When Gadget A becomes a reality, Device C results. It is then possible to cross-fertilize this technology with the data now in existence in Science K. We come up with an instrument that will be useful at that time in thrimaline research over there, possibly leading to . . . In other words, a multi-dimensional array. Organized brainstorming, or cerebral popcorn.

Science-fiction, where it has considered future trends and future cultures, has been both unimaginative and conservative. In relation to reality, that is. The predictions of s-f are an order of magnitude better than those of professional scientists, but are still several orders of magnitude below reality. Things are going to happen much faster than we think, and they are going to have much wilder implications than we have considered. We need only look at the last twenty-five years. And we need to realize that we will see just as much change in the next ten years.

If we have the courage to admit this to ourselves, it means that it is time to think, time to argue, time to speculate, and time to philosophize. If the trend curves can tell us that all this—and more—is going to happen, we should try to do a little engineering and planning in advance so that they don't happen willy-nilly, so that we can have some control over making them happen the way we want them to. We can and must plan for the future world in the same manner that a successful business plans for the inevitable retirement of a bond issue on a certain future date.

Science-fiction is the obvious and logical medium in which to do this. S-f is truly speculative fiction. It has been fairly successful in the past, but its true Golden Age is yet to come if it again realizes that the future is starting to happen right now. There is plenty left to speculate about because the well hasn't gone dry.

Ed. Note: The *latest* set of Stine predictions will be available by the time you read this, in his new book, *Man and the Space Frontier* (Knopf, 1961).

SUMMATION

The Year in S-F

by Judith Merrill

When I determined to include in this collection the excerpts from Harry Stine's as yet (at this writing) unpublished article, I was motivated by several things.

First, and most evident, was the paucity of *good science fiction*. There was an abundance of high-quality speculative and imaginative fiction of various kinds, published in every conceivable medium, during 1960; there was very little "real science fiction" anywhere—in or out of the specialty publications—and of that little, most was mediocre to poor.

At the same time, I did not, and do not, believe that the genre is disappearing. It is, certainly, diffusing—spreading out from a limited-circulation group of fiction magazines and a select grouping of hardcover book titles, to the mass markets: paperback novels, radio and TV, comic books, newspapers, and large-circulation general magazines.

In another sense, too, it is diffusing. Until a few years ago, "pure science fiction" confined itself, with rare exceptions, to speculation about space, the atom, and possible inventions or discoveries in the physical sciences.

The very technological advances that have swallowed up the old subjects almost entirely have, meantime, opened up whole new frontiers. And in the same way, the new media of communication now open to science fiction provide it with a new function as well.

Science fiction did not invent speculative thinking; it was quite the other way round. For whatever reasons of historical happenstance, the special kind of thinking that lies between outright fantasy and scientific hypothesis was focussed for a while largely in the s-f magazines. Now, some of the best story plots are going into reports by research and development men for the government, the armed services, the big corporations, and such novelties in our scheme of things as the Rand Corporation. What part

of this thinking is not channeled into governmental or industrial secrecy is as likely to appear in essay form in a serious journal as in adventure trappings in the magazines.

Mr. Stine has pointed out several areas not currently being examined in this way by industry or government, and has provided a tool for the job. Meantime, there is another job for s-f to do—and one it is doing effectively.

The switch to initials just above was intentional. I am talking now about the whole field of science-fantasy, of speculative literature. And the job I refer to is roughly equivalent to that performed by the Encyclopedists before the French revolution: PR, essentially, public relations.

I have stressed throughout the book the underlying theme of communication. Perhaps writers in the field are so concerned with the one subject just now because the motivation of the writers themselves has shifted somewhat from extrapolation to explanation?

The modern scientist cannot possibly even attempt to keep up with progress in specialties outside his own; publications come too fast and frequently. But the modern citizen *must* keep up with at least the broadest outlines of new developments—and must be prepared, continually, for the most radical of new departures. The best of academic educations have not prepared even the most willing laymen to think in terms of tomorrow's strange new world; and few citizens have either the studiousness or the background to keep up with the accelerating rate of change.

TV has proved, or re-proved (the advertising agencies did it first) the relative impact of pictures and words; there is the same distinction to be made between word-pictures and word-studies. To the specialist, the study is more informative; to almost all others, the word-picture is more so—not only because it informs more quickly, but because it does it more graphically.

Newspaper columnists, among others, have seized on this "pictorial" use of s-f recently. Of the future-story columns I've noticed, two in particular struck me as most effective: William A. Caldwell's "Locked Alone in the World," (under the by-line: "Simeon Stylites") and William V. Shannon's "1961."

For non-fictional, straight-article presentations of speculative material throughout the year, both *The Saturday Evening Post* and the *Saturday Review* made impressive publishing records—addressing similar information to different readers in very different styles.

A surprising amount of material was also published during 1960, in general and literary magazines, *about* science fiction, science fantasy, and the “s-f way of thinking.” Some of the special attention was, of course, stimulated by the Amis book (*Nation's* “Lucky Jim and the Martians,” for instance). More of it was the product of the dilemma of education and communication in general: Norbert Wiener’s “The Grand Privilege”; John Lear’s “When Space Travel Was Witchcraft”; N. R. Hanson’s “Science Is a Way of Seeing” (all in SR); Thomas N. Scortia’s “The Captive Eggheads” and Robert Bloch’s “The Clown at Midnight” (in *Rogue*); and the extraordinary article, “Unbelievable but True,” in *The Saturday Evening Post*.

Within the specialty field, also, fact articles—and critical essays—have been more numerous and more interesting. The previously established series by Willy Ley (*Galaxy*), Isaac Asimov (*Fantasy and Science Fiction*), and Kenneth Johns (combined pseudonym for Kenneth Bulmer and John Newman in *New Worlds*), continue as brisk and intriguing as before. John Rackham contributed a thoughtful piece on “The Science Fiction Ethic” to the 100th issue of *NW*. Sam Moskowitz’s scholarly series of researches on fantasy authors (*Fantastic*) is coming up to contemporary writers. Ted Sturgeon’s initial column in *If* promises a bright future—though Fred Pohl’s reviews will be missed. In the same way, while mourning Damon Knight’s absence from s-f reviewing, I have found Alfred Bester’s fresh approach to s-f criticism (*F&SF*) provocative and stimulating. A whole new publication devoted to “science-fiction-non-fiction” has emerged: *The Journal of the Interplanetary Exploration Society*. But the most dramatic of the excursions into speculative essay took place in *Analog*.

It was John Campbell’s magazine to which the title of the *SEP’s* “Unbelievable but True” piece applied, and the

article seemed to have been stimulated primarily by Campbell's crusading articles and editorials for investigation of the Dean Drive.

The "Dean Drive" is an invention of a Washington, D. C., mortgage expert named Norman Dean: a device to convert rotary motion into unidirectional motion, extremely suitable for a space drive (among thousands of other applications) because it somehow appears to get around Newton's law about action and reaction. All the energy goes into the push—none into push-back.

Mr. Dean had patented his device privately, after failing for several years to interest the U. S. Government in an engine which obviously *could not* work—because Newton said so. Mr. Campbell publicized the invention to the point where his last editorial on the matter ironically stated, "... Dean's device is now being thoroughly and adequately investigated by competent scientists and engineers. . . . We cannot continue to follow the work; much of it is going to duck rapidly behind closed doors; some of it definitely has already. . . ." He goes on to point out once more, emphatically, that his crusade was not for attention to the particular device, but for a new kind of approach to invention and research—for, essentially, the application of the open speculative mind to all of science and engineering.

The "Dean Drive crusade" will, I believe, redound even more to Campbell's honor as time goes on. But if the drive itself should fail to prove out, his basic fight for attention to new and *different* ideas on the part of established science will have been more than worthwhile by itself.

One other item not mentioned in either of the Honorable Mention lists to follow is the continuing emergence of verse in s-f. In addition to the irrepressible Hilbert Schenck, there were notable contributions last year by Randall Garrett, Joseph Hansen, Alan Lindsey, and Rosser Reeves.

With more and more science fantasy appearing in full-length novels rather than magazine short stories, I have felt for the last two years that this book should offer a more complete and authoritative report on the new books than I could hope to do myself. Starting with this volume, that re-

port will be handled by Anthony Boucher. But outside the realm of s-f itself there are a few new books I think may be of special interest to readers in this field. These include—

Doubleday's new series of Tutor Books: a completely new approach to self-teaching textbooks. "The Arithmetic of Computers" taught me the fundamentals of the octal and binary systems in about four fascinated hours. (Others are on algebra, trigonometry, electronics, and bridge.)

"The World Is My Country" (Putnam, 1961), is World Citizen Garry Davis's autobiographical account of ten years of living out his own private political science-fiction farce-satire-adventure.

Finally, I should like to express my considerable gratitude to those who assisted in compiling this volume—most notably James Blish and Merrill Zissman, who revised and copied the music for the songs; Ann Pohl, who did most of the cataloging; and Barbara Norville, Oriole Kingston, Mae Sugrue, and Bob Bone, for a marvellous assortment of miscellany.

S-F Books: 1960

by Anthony Boucher

As in 1959, science-fiction books were numerous and largely negligible. Not counting reprints, there appeared close to a hundred new titles—equaling last year's total and surpassing any previous year. Close to half of these came from two second-string publishers, desperately committed to monthly schedules that make tasteful selectivity impossible. Most of the rest were paperback originals; s-f in hard covers has dwindled almost to the vanishing point.

The saddest phenomenon was the lack of distinction between the weary work of hacks published to fill out a schedule and the almost equally weary efforts of some of the biggest Names in s-f. In better times, you would expect the by-lines of Brian W. Aldiss, Algis Budrys, Mark Clifton, L.

Sprague de Camp, Philip K. Dick, Gordon R. Dickson, André Norton, Chad Oliver, Robert Sheckley and Wilson Tucker to mean an all-star imperative-reading list. They all published new novels in 1960; and the novels ranged from just adequately publishable to plain embarrassing. Even the coruscant Theodore Sturgeon produced (in *Venus Plus X*) an entertainingly controversial essay which failed as a novel. For the first time in 15 years there was no novel, adult or juvenile, from Robert A. Heinlein.

But though a reviewer finds it constantly more difficult to force himself to open a new s-f novel, his conscientious effort is occasionally rewarded. Judith Merrill (*The Tomorrow People*), Frederik Pohl (*Drunkard's Walk*) and Richard Wilson (*And Then the Town Took Off*) demonstrated that it is still possible to write long s-f with some originality of concept, some intelligence and grace in the treatment; and the year did produce two permanently memorable novels, to stand in the company of the best of the past.

Poul Anderson's *The High Crusade*, which describes the conquest of the galaxy by earthmen in 1346 A.D., is as delightful as a good British film—outrageous, yet seductively plausible. Walter M. Miller, Jr.'s, *A Canticle for Leibowitz* is a major work of modern imaginative fiction: a future history of Roman Catholicism from the 26th to the 38th Centuries which is so deeply sensitive, so emotionally powerful as to have meaning for the most irreligious.

One can complain no longer of the sexlessness of s-f after 1960's rash of novels which attempted to combine prognostication and pornography, and achieved only boredom—excepting when written by Philip José Farmer. Mr. Farmer's *Flesh*, in particular, is astonishing: the most priapic book I have ever reviewed, in any genre, but quite legitimately so, using its picture of a hypersexed future to explore (and fascinatingly) some of the basic symbols of Jung and Frazer.

Lowest publisher's trick of the year: the labeling of the third book appearance of a poor van Vogt novella as "first book publication." I thought there was a law . . .

The situation was more gratifying to the reader in the field of the s-f short story. There were satisfactory one-

author collections by Heinlein, Pohl, Sheckley and Sturgeon, and distinguished ones by Aldiss (*Galaxies like Grains of Sand*), Anderson (*Guardians of Time*), Merril (*Out of Bounds*) and Clifford Simak (*The Worlds of Clifford Simak*). And again Philip José Farmer was astonishing; his *Strange Relations* goes on the permanent list of important collections—creative and stimulating s-f (in the fullest sense) which suggests that such relation-words as “father” or “sister” have an archetypal meaning quite aside from the accidents of our improbable reproductive system.

The year's outstanding anthologies were two in which editors surveyed the histories of their publications and came up with admirable and brightly varied stories: Robert P. Mills's *A Decade of Fantasy and Science Fiction* and Fredrik Pohl's *Star of Stars*. Groff Conklin resumed (huzzah!) steady anthologization with *13 Great Stories of Science Fiction* and *Six Great Short Science Fiction Novels*; and the Council of Four (Denver branch of the Baker Street Irregulars) produced the attractively unique *The Science-Fictional Sherlock Holmes*.

Highly welcome was the publication in America of the three British Broadcasting Corporation TV-plays by Nigel Kneale (*The Quatermass Experiment*, *Quatermass II* and *Quatermass and the Pit*) which demonstrate, in a manner unknown to American TV and films, that mass-appeal s-f can still be literate and intelligently exciting.

Most controversial book of the year: Kingsley Amis's *New Maps of Hell*, the first extensive and informed critical survey of s-f by a literary figure quite unconnected with the field. Your editrix devoted much of her commentary in the last of these annuals to violent disagreement with Amis. I submit that the book, arguable in details, presents a knowledgeable, broad picture of s-f calculated to cause the general reader to respect and even to investigate it.

To turn to pure fantasy—F without S—1960 was notable for the first American publication of the imaginative nightmares of Sarban (especially *The Sound of His Horn*) and for an excellent chiller of witchcraft survivals in the modern world: *The Devil's Own* by Peter Curtis (pseudonym of Norah Lofts). Robert Bloch's *Pleasant Dreams* is an agree-

ably grisly assembly of shorts; and volumes of straight mainstream fiction by Roald Dahl (*Kiss Kiss*) and the increasingly interesting Muriel Spark (*The Go-Away Bird*) contain a few first-rate fantasies.

Out of the 500-odd books, in assorted fields, that I read professionally during the year, the one that gave me the most intense pleasure was a century and a half old, though new to English. *The Saragossa Manuscript* by Count Jan Potocki (1761-1815), translated by Elisabeth Abbott, is a one-of-a-kind book, a (literally) marvelous collection of tales-within-tales-within-tales, which blends fantasy, horror, sensuality, romantic adventure, mysticism, Gothic extravagance . . . I can never describe it; I can only urge every connoisseur of caviar to leave no single egg untasted.

Honorable Mentions

Abbreviations

- Amz** Amazing Science Fiction Stories
- ASF** Analog (Astounding) Science Fact and Fiction
- Cos** Cosmopolitan
- Dude** The Dude
- Esq** Esquire
- Fant** Fantastic Science Fiction
- FU** Fantastic Universe
- F&SF** Fantasy and Science Fiction
- "F&SF:10"** "The Best from Fantasy and Science Fiction: Tenth Series," ed. Robert P. Mills (Doubleday, 1960)
- Fut** Future Science Fiction
- Gal** Galaxy Science Fiction
- Gent** Gent
- If** If Science Fiction
- Ken** Kenyon Review
- LHJ** Ladies' Home Journal
- McC** McCall's
- Mlle** Mademoiselle
- NW** New Worlds (British)
- "NWW #16"** "New World Writing #16" (J. B. Lippincott Co., 1960)

OSFS Original Science Fiction Stories

Plby Playboy

Rog Rogue

SEP Saturday Evening Post

SciF Science Fantasy

17 Seventeen

VANCE AANDAHL "It's a Great Big Wonderful Universe," *F&SF*, Nov.

MRS. AGATE "Slammy and the Bonneygott," *F&SF*, June.

POUL ANDERSON "The Burning Bridge," *ASF*, Jan.; "The Martyr," *F&SF*, Mar.

ANDERSON, ASIMOV, BLOCH, LEINSTER, SHECKLEY "The Covenant" (round-robin story), *Fant*, July.

CHRISTOPHER ANVIL "The Troublemaker," *ASF*, July.

J. G. BALLARD "The Last World of Mr. Goddard," *SciF* #43, Oct.; "The Voices of Time," *NW*, Oct.

JOHN BERRY "The Listener," "NWW#16."

JAMES BLISH "The Oath," *F&SF*, Oct.

ROBERT BLOCH "The Funnel of God," *Fant*, Jan.

WILLIAM BRANDON "The Hermit," *SEP*, Mar.

JOHN BRUNNER "Badman," *NW*, Mar.

"Imprint of Chaos," *SciF* #42, Aug.

ALGIS BUDRYS "The Price," *F&SF*, Feb.; "Rogue Moon," *F&SF*, Dec.

WALTER BUPP "Vigorish," *ASF*, June.

ARNOLD CASTLE "When Day Is Done," *If*, May; "The Perfectionists," *Amz*, Jan.

ARTHUR C. CLARKE "Inside the Comet," *F&SF*, Oct.

TOM AND GLADYS CLUFF "The Lutine Bell," *FU*, Feb.

THEODORE R. COGSWELL "The Burning," *F&SF*, July.

CHARLES COTTRELL "Jack of No Trades," *Amz*, Aug.

GORDON R. DICKSON "An Honorable Death," *Gal*, Feb.

WILLIAM EASTLAKE "What Nice Hands Held," *Ken*.

CAROL EMSHWILLER "Puritan Planet," *OSFS*, Jan.

PATRICK FAHY "Bad Memory," *Gal*, Dec.

JACK FINNEY "I Love Galesburg in the Springtime," *McC*, Apr.

DAVID E. FISHER "East in the Morning," *Gal*, Feb.

JEAN FRITZ "Haunted Christmas," *17*, Dec.

- RANDALL GARRETT "...And Peace Attend Thee," *Fant*, Sept.;
"Drug on the Market," *FU*, Feb.
- PHYLLIS GOTTLEIB "A Bone to Pick," *Fant*, Oct.
- WILLIAM LINDSAY GRESHAM "Room for One More," *Dude*,
Nov.
- JIM HARMON "Blueblood," *Gal*, Dec.
- LARRY M. HARRIS "Charley de Milo," *ASF*, June.
- RAYMOND HARTLEY "Monkey on My Magazine Rack," *Gent*,
May.
- ZENNA HENDERSON "Things," *F&SF*, July.
- CHARLES HENNEBERG (trans: Damon Knight) "The Blind
Pilot," *F&SF*, Jan.
- FRANK HERBERT "Egg and Ashes," *If*, Nov.; "The Priests of
Psi," *Fant*, Feb.
- PHILIP E. HIGH "Mumbo-Jumbo Man," *NW*, Jan.
- HUGH HOOD "After the Sirens," *Esq*, Aug.
- LANCE HORNE "Nuclear Justice," *NW*, July.
- HAYDEN HOWARD "Murder Beneath the Polar Ice," *If*, July.
- EVAN HUNTER "It Was Lovely That Summer," *Dude*, Mar.
- EUGENE IONESCO "Rhinoceros," *Mlle*, Mar.
- RONA JAFFE "Trompe l'Oeil," *Cos*, July.
- STEPHEN A. KALLIS, JR. "The Untouchable," *ASF*, Dec.
- COLIN KAPP "Enigma," *NW*, Feb.
- DANIEL KEYES "Crazy Maro," *F&SF:10.*
- DAMON KNIGHT "Time Enough," *Amz*, July.
- R. A. LAFFERTY "McGonigal's Worm," *If*, Nov.
- REX LARDNER "American Plan," *F&SF*, May.
- KEITH LAUMER "Combat Unit," *F&SF*, Nov.
- STANLEY R. LEE "The Eye of Aesculapius," *Fant*, Dec.
- FRITZ LEIBER "The Night of the Long Knives," *Amz*, Jan.
- MURRAY LEINSTER "The Ambulance Made Two Trips," *ASF*,
Apr.
- DAN LINDSAY "The Beatnik Werewolf," *F&SF*, Dec.
- C. B. LOVEHILL "Gentlemen Be Seated," *Rog*, Apr.
- KATHERINE MACLEAN "Interbalance," *F&SF:10.*
- LARRY MADDOCK "Creatures, Incorporated," *NW*, June.
- RICHARD MATHESON "First Anniversary," *Plby*, July.
- KATE MCNAIR "Her Dearest Wish," *LHJ*, Nov.
- E. MITTLEMAN "The Non-Electronic Bug," *If*, July.

- HOWARD NEMEROV "An Executive," *Esq*, Dec.
 ALAN E. NOURSE "The Mirror," *Fant*, June.
 HAROLD PARSONS "The Funnel," *NW*, Aug.
 FREDERIK POHL "The Day the Icicle Works Closed," *Gal*, Feb.
 ARTHUR PORGES "Words and Music," *If*, Sept.
 JOHN RACKHAM "The Bright Ones," *NW*, May.
 FRANCIS G. RAYER "Static Trouble," *NW*, Feb.
 BRIAN RENCELAW "Ounce of Prevention," *Plby*, Sept.
 MACK REYNOLDS "Combat," *ASF*, Oct.; "Revolution," *ASF*, May.
 CHARLES W. RUNYON "Remember Me, Peter Shepley," *Fant*, Dec.
 WILLIAM SAMBROT "The Story of an Atomic Age Ordeal," *SEP*, July 9.
 WINSTON P. SANDERS "The Word to Space," *F&SF*, Sept.
 THOMAS N. SCORTIA AND JIM HARMON "Caliban," *Fut*, Apr.
 JACK SHARKEY "The Dope on Mars," *Gal*, June; "Equity," *Dude*, Sept.
 ROBERT SHECKLEY "The Girls and Nugent Miller," *F&SF*, Mar.
 ROBERT SILVERBERG "The Still Small Voice," *Amz*, May.
 CLIFFORD D. SIMAK "Final Gentleman," *F&SF*, Jan.; "Gleaners," *If*, Mar.
 CORDWAINER SMITH "The Lady Who Sailed the Soul," *Gal*, Apr.
 THEODORE STURGEON "Like Young," *F&SF*, Mar.
 WILLIAM F. TEMPLE "Sitting Duck," *NW*, Nov.
 THEODORE L. THOMAS "The Crackpot," *ASF*, Nov.
 DON TRACY "The Owl That Asked Why," *SEP*, Dec. 24-31.
 E. C. TUBB "Too Bad," *SciF* #40, Apr.
 LELAND WEBB "A Man for the Moon," *Plby*, Aug.
 W. T. WEBB "Not a Sparrow Falls," *SciF* #39, Feb.
 DONALD E. WESTLAKE "Travelers Far and Wee," *OSFS*, May.
 ROBERT WICKS "The Impersonator," *If*, Nov.
 KATE WILHELM "When the Moon Was Red," *Amz*, Sept.
 RICHARD WILSON "The Best Possible World," *NW*, Sept.
 JOHN WISDOM "The Lonely Crowd," *Dude*, Sept.
 WILL WORTHINGTON "Abide With Me," *Fant*, Jan.
 MURRAY F. YACO "No Moving Parts," *Amz*, May.

"S-F

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HER SIXTH ANNUAL MAKES...A VINTAGE ONE"

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