25th Year of Publication

THE MAGAZINE O

Fantasy AND Science Fiction

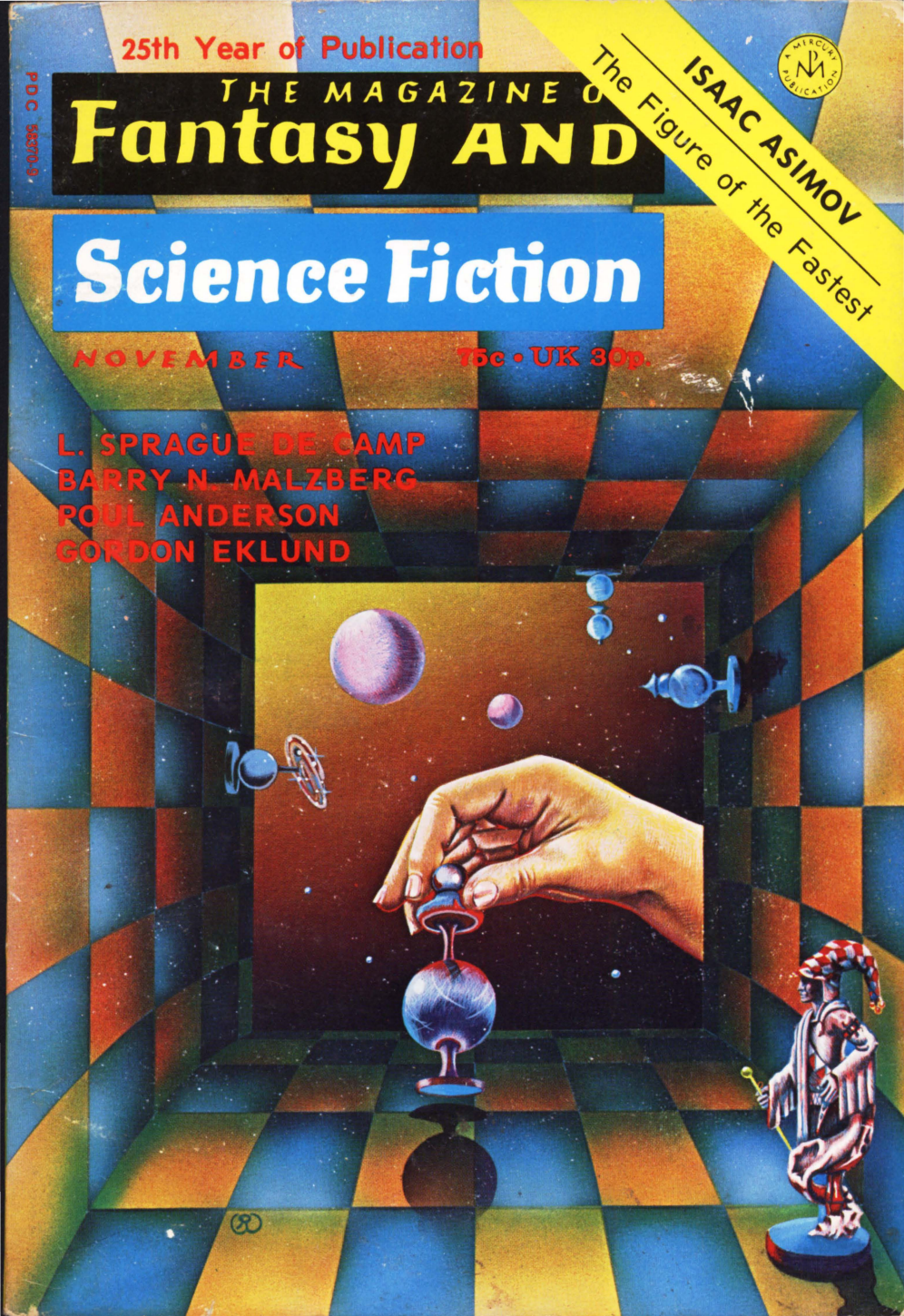
ISAAC ASIMOV
The Figure of the Fastest

A MERCURY PUBLICATION

NOVEMBER

75c • UK 30p.

L. SPRAGUE DE CAMP
BARRY N. MALZBERG
POUL ANDERSON
GORDON EKLUND



Fantasy and Science Fiction

Including Venture Science Fiction

NOVEMBER • 25th YEAR OF PUBLICATION

Cover by Ron Walotsky for "Closed Sicilian"

Edward L. Ferman, EDITOR & PUBLISHER — Isaac Asimov, SCIENCE EDITOR

Andrew Porter, ASSISTANT EDITOR — Dale Beardale, CIRCULATION MANAGER

Joseph W. Ferman, CHAIRMAN OF THE BOARD

LIBRARY OF CONGRESS CATALOG CARD NO: 51-25682

The Magazine of Fantasy and Science Fiction, Volume 45, No. 5, Whole No. 270, Nov. 1973. Published monthly by Mercury Press, Inc., at $.75 per copy. Annual subscription $8.50; $9.00 in Canada and Mexico, $9.50 in other foreign countries. Postmaster: send form 3579 to Fantasy and Science Fiction, Box 56, Cornwall, Conn. 06753. Publication office, Box 56, Cornwall, Conn. 06753. Editorial submissions should be sent to 347 East 53rd St., New York, N.Y. 10022. Second class postage paid at Cornwall, Conn. 06753 and at additional mailing offices. Printed in U.S.A.

Phyllis Gotlieb demonstrated in "Son of the Morning" (June 1972) that she has a special talent for conjuring up alien types that are both fresh and totally convincing. Here she writes about the Amsu, a race of Leviathans more than a half-mile long, who are being used like machines for space travel until suddenly their environment turns hostile.

Mother Lode

by PHYLLIS GOTLIEB

The Amsu spend their lifetime foraging in a zigzag course between the ice rings and the asteroid moons of Epictetus VI, called Apikiki by most of its inhabitants. The local name provokes laughter among some visitors, but the Amsu do not. They are a kilometer in length, and occasionally the young and ignorant ones try to engulf a ship; since they are protected by GalFed, these incidents lead to embarrassing complications.

Amsuwlle was old and wise: she ate ore, drank ice and kept on course. When the Surveyor *Limbo*, a fast cruiser, docked with her on short notice, she extruded her siphon, planted it smartly over the lock door with a solid *flump*, paced the ship without wobble or quiver till the door opened, and flooded the lock with cold water.

:Good luck.: Threyha was Sector Co-ordinator and ESP on the *Limbo*. She sent a last picture of herself from her tank, waving a languid scaly hand.

:Thank you.: For nothing. Elena Cortez was waiting in a wetsuit with oxygen tanks; the current whirled her like a top and pulled her into the tube. It sealed behind her and retracted pleating as it went, to the vast phosphorescent chamber of Amsuwlle's gorge.

She spun in the dim turbulence, fighting ore chunks and luminous gas bubbles and trying to muffle an explosion of awful panic. *Out! Out! Out!*

:What a pity to cause you such inconvenience.:

A valve opened close by and decanted her into a spherical cavity;

the rocks and liquids sucked out, the wet walls squeezed her gently, *:Never fear, Zaf is here!:* the sinus filled with gas, and she hung in its center, then spiraled toward the wall and landed in a puddle of silt. Amsuwlle had begun to spin.

:The air is quite good, my dear. Welcome aboard!:

She pulled off the mask. There was air all right, cold and damp; it smelled of stale water and wet metal, with an overtone of tart cool flesh like a melon's and no hint of decay. She unbuckled the tanks, shivering, scrubbing at her face with cold crinkled hands to wipe away the sweat of fear and embarrassment. She watched the faint ripples of light on the walls, listened to the whish and slap of water, the suck and blubber of valves, and seven or eight hearts going boom, whicker, thack, flub, tickatick with no ascertainable co-ordination, as if a clockmaker had set all his timepieces going at once and the grandfathers, alarms, turnips, electrics, chronometers went on telling their own time.

A round red glow of light grew on the dark wall before her, and something like a black arm came through, tipped with two horns instead of fingers, one of them hung with a penlight.

"Well, Zaf, I am a terrible coward. Anyway, it is good to see you again."

Zaf pulled his length through the valve. He was about the size and thickness of a python, and except for his gleaming blackness and his horns, looked much like an annelid worm. He smelt faintly of sulfur compounds.

"A great pleasure," he said, and dipped his anterior end. It had a mouth and behind that a silver light-sensitive band. The air was not good for him: he was strapped with a tank, and tubes ran into several of his gill slits; with the free ones he manipulated air into speech. He was an ESP but also the soul of tact; he used his strange warble to communicate with all speaking creatures.

A Solthree pushed his way through, a tall heavy man with red hair and beard. "I'm Roberts," he said. "I suppose Zaf's told you who we are. Jones is spraying and Takashima's sleeping. God, it's cold in here." He rubbed his hands, twitched his eyes in every direction except hers. "You'll want a change and a hot drink. No alcohol on board, I'm afraid."

"I know," Elena said. Nothing inflammable was carried on an Amsu, and foreign bodies stored and recycled their own wastes. *:What is worrying him, Zaf?:*

:Dear lady, I never pry. That is your business.: Mild ESP chuckle. *:But I think he must have some idea why you are here.:*

Elena Cortez, an enthusiastic student of interterrestrial relationships, had the unhappy task of telling people where to get off. When a new colony was seriously disturbing the ecology or the native civilization of a planet, no matter how perfect it might be from the point of view of its settlers, she had GalFed authority to ask it to shift, remove, or disperse itself. She had no power to shift or remove it herself, nor to threaten to do so. Otherwise she would not have lived through many tacky situations. She was a distant early warning. She warned gently, listened to impassioned arguments calmly, and almost always succeeded at the unpleasant work. When she did not succeed, she accepted refusals gently. The colony, if endangered, was left to itself; if it was a danger, it was left to legal, political or military authorities. Those who rebuffed Elena always lived, or did not live, to learn better.

Amsuwlle spun gently against the flow of planetary debris. Unlike her hearts, the grooved excurrents on her sides worked in co-ordination jetting silvery threads of vapor to keep her on course. She was shaped like a vegetable marrow, and from a distance seemed just as smooth. Closer she was dappled with pale light-sensors and huge opalescent patches; closer yet her skin was ridged and grooved in a brain-fold pattern; it was flexible but firm. At her mouthless front end she had a sensory network fine enough to taste a single microgram, at the rear end an ovipositor, midway two intake siphons and an excretory tube. She excreted compacted nuggets of titanium, tungsten, vanadium, selenium and other useful metals. Because of that she was protected by GalFed and men rode her along her jagged path, spraying her eggs to keep down fungus and scraping calcareous deposits off her arteries.

Since she did not expect to stay long, Elena carried one coverall in her waterproof bag. It was of the good grey stuff GalFed fitted its surveyor teams with, and she had painted a pattern of leaves and flowers all over it; it was sufficiently incongruous in the tiny dayroom, lined in polythene, where one lamp hung overhead and every once in a while the amoeboid shape of a cell or parasite, swimming free in tissue fluid, flattened itself against the translucent wall.

There was room for only one more at the table; the men's heads almost knocked against hers: Roberts, the research geologist, whose beard bristled an inch away; Zaf hanging in coils from some kind of rack and looking like a caduceus; Dai Jones, a little dark

wiry man, the only miner of the lot; and round-faced Takashima, the heir to an electronics firm who was taking a look at one of the sources of his components. Hearts beat around them in endless pulses of disharmony.

:You have all been happy here, Zaf?:

:Oh indeed all Solthrees love the Amsu. For myself of course it is east, west, home is best. That is an apothegm of our philosopher-king Nyf.:

:It's well-known; his fame travels far.:

:Now you are laughing at me, Elena.:

:Never, Zaf. You know I don't behave that way. I am always happy to learn how closely distant peoples think.:

She said aloud, "Perhaps you know why I am here. You can see I have never boarded an Amsu before, but I am taking over liaison in this sector because your regular, Par Singri, is ill with fungous bronchitis and I am subbing."

"I thought Zaf was our liaison," Jones said.

"Between you and Amsuwlle, yes. Here I am liaison between the Amsu and Zaf at this end and GalFed at the other." She squeezed the last drop from her bulb of tea and refilled it.

"What's the emergency?"

"There have been delays in rendezvous with ore carriers. Amsunli was four standard days late on her last trip and Amsusdag two days."

"What's that supposed to mean? Hell, you get delays in all kinds of space shipping, and the Amsu aren't machines, they're animals."

"They have been charted for fifty years...in the last three years more than half the deliveries have been delayed. And there is more. Twelve days ago Amsutru was going to meet with the ore carrier *Raghavendra.* Then nine days late she is found squashed in a mess against Asteroid 6337 with her crew dead, every one, and also a prematurely hatched larva burrowing through her siphon."

A small silence. Jones clasped his hands tightly. "Amsutru? My God, Jack Tanner was on her. I knew him."

"No man has ever died on one before...and, you know, there are not that many Amsu — never more than twenty-five at once."

"A freak accident," Roberts said.

"Yes, maybe."

"But you're here. You expect something to happen here."

"Oh, I hope not. But...you are thirteen days out and twelve to go...you are eighteen hours behind schedule. You have been aware of that, haven't you?"

"Sure we're aware of it! We get course checks on radio from the spacelight transmitters."

"What do you expect to do about it, Dr. Cortez" Jones asked. "We can't give the old lady a kick in the shins."

"Has anything odd happened?"

"Not that we know. We figured everything was going all right."

"That's likely true. But still, Amsutru is gone, and you can understand why GalFed is concerned."

"But what do you intend to do?" Roberts asked.

"Well, no one has ever turned an Amsu around, have they? Maybe we will not have any more delay, and I will just look around and have a nice ride."

Takashima laughed. "I think you will end up doing jobs like us, Dr. Cortez. Amsuwlle has no room for tourists."

"But if there is trouble?" Roberts persisted.

"I would hope, gentlemen, that we would all be able to get the hell off."

"Well, Zaf..." They were alone, and Elena did not feel she had done very well. She was a small dark woman from Venezuela, very delicately boned, with thick black hair falling to her shoulders. Her ancestry was a mixture of all the local peoples, and her skin color balanced light brown with terra cotta. Happily mongrelized, she had the knack of making herself at home among very disparate peoples, but she did not normally handle the complaints of ore shippers, especially ones who shipped on Leviathans. "I am a fish out of water," she said.

"I think you have another image in mind," said Zaf, as Amsuwlle's liquid pulses thudded.

"Well, I am very...no, I am not discouraged. This is odd. I feel quite calm."

"Good."

"But I should not be. I heartily dislike this assignment —"

"Since I asked for help, I am afraid I am to blame."

"Oh no! It is Par Singri who was stupid enough to get sick. He would have done better here. I enoy being with you, and I have nothing against Amsuwlle, but I do not like to be in places where things are always throbbing and bubbling... yet I am calm." She clasped her wrist and studied her watch. "My pulse is normal."

"Then I suppose that is not so good."

"Now you are laughing at me...but I admit I am being irrational." She looked around till her eye lit on the waste container with its empty bulbs. "Some kind of drug? I don't know which one of those is mine."

"There are no drugs on board — oh, Roberts brought some Banaquil for his nerves, but he stopped using it after the first few days, and no one has touched it. It is a prescription drug. He considers it a weakness to take pills and had only enough to last the trip."

"I have no drugs except a little painkiller for an ear infection because I was afraid being underwater would start it again... but I feel a little sleepy...and a little dull. Have the men behaved strangely? Have they changed at all since they came on board?"

"They don't quarrel at all and that is strange for Solthrees — but on the Amsu they are never together long enough."

"Do you feel different since you have been here?"

He shifted his tanks. "Let me damn well tell you I miss my mud, and this synthetic stuff is wishy-washy to a disgusting degree."

Elena laughed, but when he had gone, she collected four of the discarded bulbs and took them to her cabin.

She sat on her bunk and looked at them. There was a drop or two in each. *Elena, you are just being stupid.* She turned the faucet set into the living wall, drew a little water into a cup and tasted it. It was deliciously cold and good, otherwise not unusual in any way. Yet, she did not feel quite herself. *Of course you should feel tired from what you have been through, and any other effects are probably from spinning on this creature. Even your old friend Zaf thinks you are an idiot.*

:I do not.:

:Now you are prying!:

:Elena dear, however stupid you may think you feel, it is a fact that Amsutru got lost and we are behind schedule. You were chosen to come here on very good ground and even the wildest suspicion you have must be checked out.:

:Good, Zaf. Now I may let my fantasy run wild...you know the Limbo *is pacing us?:*

:I am aware of it. How long is Threyha giving us her kind attention?:

:Until I can find her an answer, querido.:

:I hope she will not be bored on such a long slow trip.:

:Ask her how to modify our equipment to test the water for Banaquil and also three or four of the main tranquilizer groups. Try out the liquid in these bulbs and also the main water supply...and, oh yes, we do have distilled water for emergencies?:

:Indeed, but a canister will take quite a lot of your cabin space.:

:I am traveling light, and I am not expecting company.:

There was nothing else to do but try to sleep. Even with the drowsiness it was not so easy with all the distractions in the very walls.

Then think about water.

What the Amsu produced was regularly tested — between trips. On board it was Zaf's task to make sure it was maintained to GalFed specs, but he checked for substances poisonous to Solthrees and his own Yefni, not psychotropic drugs that wouldn't have any effect on him.

Roberts' Banaquil had not been touched. Outside source. She threw out politics, plots, and pirates. The arrangements with the Amsu were the results of agreements among many peoples; the profits were parceled out equitably. She knew the sector very well; it was thoroughly patrolled, and local rivalries kept to a minimum. No one had ever stolen ore. The Amsu were happy to be well cared for; they were not particularly intelligent, but they had some ESP and knew ways of containing and rejecting substances — and persons — they thought might do them harm.

She went to sleep, finally, among the bubblings and thuddings; the pale wash of phosphorescence over the walls, the huge living engine of a sentient being.

A call to the unconscious woke her, and she opened her airlock. It was a tiny chamber almost fully occupied by Zaf, coiled around a canister of distilled water.

"There is Banaquil in the water supply, five milligrams per liter, and in all of the bulbs too. Nothing else, you may be thankful."

"I may, but I think I am not. Who is putting it in?"

"Elena, this is hard to explain, Amsuwlle is synthesizing it. Who could put it in when Roberts' supply has not been touched? The others don't even know of it."

"But...why? And how did she get it? All the wastes are recycled. From sweat?"

"I can show you, I think. Will you let me squeeze into your cabin for a moment?"

Inside, he bent his head low and with the sharp tip of a horn drew a gash between two of his black rings.

"Zaf!"

"Don't be frightened. I heal fast." He pulled the cut apart with a sinuous movement, and a globule of viscous yellow blood dropped slowly to the floor. It lay there a moment, spread slightly, and in a few moments sank without leaving a mark, absorbed. "Roberts cut himself on one of his instruments. Oh, nine or ten days ago...she knew of his drugs, and his nervousness, through me, probably..."

"And picked it up from that tiny specimen?"

"Very simply. She tracks ore fields by traces as small as one microgram. She is just as sensitive within."

"But why?"

"Oh dear...can you not guess? Because of the quality on which all of our mining operations depend." He gathered his coils together and began to move backward out of the cabin. "Amsuwlle loves to please."

"Wait!" She gave him a hard look, very difficult because the eye band ran around his head, and there was no place to bring a focus to bear. "You know of such things that have happened before."

"That's true, I don't deny it."

"And you have reported them?"

"Of course, Elena! They proved of great interest to anatomists and psychologists...administration did not find them worrisome."

"What kind?"

"One of the first Amsu we used grew an extra heart to deliver more heat and oxygen to this part of her body for our sake — and incorporated the change in her genetic material...would you find that worrisome?"

"I think...one day, perhaps, it might be."

"Possibly. Now I will let you finish your sleep. I must work."

"Wait. What about the Banaquil?"

"It can be gotten rid of — with tact — and do you think it wise? Of course it cannot have been in the water longer than ten days, and there is no worry about withdrawal symptoms with such small amounts...and the men are disturbed enough now. Whatever you choose."

Elena paused. "You must help me decide. If things are left as they are, we may fall farther behind."

"Something must change. We have introduced a new element — yourself, my dear. And I doubt — I do not know what an opium den is, but you have a thought about men lying around asleep — I doubt that is what happened with all the other delays. The drug is only one factor in this unhappy situation." The lock door closed behind him.

And beyond it came a furious thrashing and thumping.

:Zaf, what is it? What's wrong?:

She refuses to open up. I cannot get through the valve.:

:Come back in here.:

:I am required to take accounting of the stores, and believe me, you and I will not be comfortable together in one cabin for any length of time.:

:I am not very comfortable myself right now. I will come out.:

:If you wish, though I doubt it will help. Bring your oxygen.:

The crew quarters were in a storage area off the posterior

intestinal canal, a blind sac divided mainly by natural walls partly fortified by inert plastics. A little airlock with an artificial opening had been built into each cabin. Elena's lock had two other openings: one to the neighboring lock and a natural one to the great water conduit Zaf was trying to get out to.

:Go through to the other lock,: Elena said.

:That would be difficult. It opens outward and it is full of water.: He hunched up a coil and slammed it against the rubbery valve into Amsuwlle's belly. Elena ran her fingers over the puckered surface trying to find give in it. There was none.

:Why is she doing this?: She was not afraid of enclosed spaces, and for the moment was too curious to be frightened.

:I am trying to find out, if I can be allowed to think.:

:Think good, Zaf. Think mud.:

:I am going to make mud if I don't get out of here pretty damn fast.:

For all that he looked like a cross between a worm and a python Zaf was vastly different from either. He could wind but not slither: his integument was a single helix of cartilage, a powerful and, fairly rigid casing with not much give between its whorls. His two horns curved one to the front and one to the rear, and on his home planet he wound through the mud like a corkscrew or a post hole digger; the muscular black spring of his body was strong enough to pierce shale and sandstone as well. He could rip Amsuwlle's internal tissues more easily than he had slit his own.

Perhaps that consideration reached some important ganglion in Amsuwlle's constitution, for after a moment the valve opened with an elastic *blap* and a rush of water and debris slammed against them. Zaf whirled away to his tasks. *:Not very polite,:* was his only comment.

:But you haven't told me why!:

:Oh Elena! can you not understand? She needs us!:

Elena wrung out her leotard and wrapped herself in a blanket.

She needs us. Us = Jones, Roberts, Takashima — and Zaf. They serve, she provides. *She does not need me. I am the interloper* (and keep it down and far back now ((who may take them away))). *And Zaf? He is disturbed. Can I trust him, my friend of so many years? Yet he called for help, he brought me here — and who else is there?*

"There is nothing in the men's psych reports to suggest abnormal bonding with the Amsu."

She and Zaf were alone in the dayroom. Since there was no real

night or morning, everyone chose his own schedule. Elena drank coffee sparingly and ate something that seemed to be moistened chicken feed. She had no intention of living solely on distilled water derived from recycled wastes.

"Of course not. They are all within normal range. Roberts is thirty-eight years old, a bachelor, helps support old parents, lady friend nine years no immediate plan to marry, takes pleasure in playing music on some kind of blowpipe with group of people, mild frustration and resentment common to age and situation — among Solthrees.

"Takashima is twenty-seven, married with two children, overindulges in food, generally content, only complaint he has no one to play Japanese chess with.

"Dai Jones, forty-one, comes from large family now scattered, impoverished background, hard worker, divorced no children, unfortunate experiences with women, feels or is unattractive to them.

"Make of that what you will, *I* don't know what it means. I have no time to lie around in loops and chatter. I must work."

"I will come with you."

She followed, bubbling and gasping in the cold vaults, while he zapped suspicious-looking amoebae with antibiotic bullets and used a strigil like a giant squeegee to scrape and collect calcium fibers from the walls of the pale blood vessels that Amsuwlle obligingly emptied for him one by one.

:Zaf, there are no psych reports on the Amsu.:

:There was no need for them as long as there was no danger.:

:Oh, I ask always, but she has not much to say. No language! In feeling it is always: nice, good, or: pain, heaviness. They reproduce slowly, very slowly, and of the two eggs Amsuwlle is carrying one is malformed and will abort. Sometimes...there is almost something like "thank you." They are not very strong for the terrible conditions they live in...look, here is a softness in the wall...I think she is developing an aneurysm. It may burst.:

:Could that kill her?:

:In the artery from the heart that feeds her principal ganglion, yes. This is not a serious one. We can have it fixed.:

:But Zaf, don't you realize : :

:In a moment, Elena. Come with me.: He squeezed through a tiny opening and pulled her after.

Of the great and marvelous chambers Amsuwlle contained there was no end.

For all the freakish richness of her nervous system, she was only

the elaboration of a very simple animal found in small on many worlds. She was essentially a skin on the outside and an alimentary canal within; she had no limbs to move and her musculature was all visceral: it served mainly her hearts, intestines, blood vessels, and reproductive organs. Between her gut and her horny epithelium were tremendous sinuses of almost liquid protoplasm, broadly netted with cables of nerve and vein and swimming with strange arrow-shaped creatures of pale mauve, a meter long and with luminous nuclei. *:Mesenchyme.:* Zaf said. *:They do odd jobs and turn into specialized cells when Amsuwlle needs them.:*

To Elena the diaphanous swimmers seemed like choir-boys serving an altar, and the vast cavity with its glimmering lights and pumping organ hearts trembled in the atmosphere of an ancient cathedral.

:This is beautiful.:

:Yes, even a Yefni may admire it.:

:I wonder if it was an aneurysm that killed Amsutru.:

:Oh, Elena, how you must spoil things! That kind of serious malfunction never occurs except in very old animals, and we never ride them beyond a certain age. A minor one such as she has now she could heal herself.:

:Still —:

Something grabbed her hard round the middle and squeezed.

Zaf swung his lantern round. A girdle of mauve iridescence, its nucleus elongated and writhing, was doing its best to divide her in two. Zaf bent his head and hooked it off with one horn, snicked a bladed claw from his tail and sheared it neatly in half. The halves, forgetting their errand, dashed off in opposite directions.

Elena's mask had slipped, she was doubled and choking. Zaf slapped it on true, and she howled inward a lungful of air. Then he dumped his light and scraper and looped a coil around her. A flock of devilish choirboys dove at them with solid thumps. Zaf twitched his blade, the arrows retreated a space and swiftly coalesced into an enveloping mantle to engulf foreign bodies. Zaf freed Elena and butted her away; she drifted outward through the light jelly till she found a handhold on a minutely pulsing capillary. Her own pulses were roaring, and she watched the battle through sparkles in her eyes, in the light of the mesenchyme itself. Protoplasm, no matter how ill-intentioned, was no worthy adversary for any Yefni. He ripped and slashed with horns and tail till they exploded in quivering spheres and expanded, a liquid nebula, outward to darkness.

Still in a fury, he found Elena, coiled her, and spun her toward the valve. It did not open at his touch; he wrenched it viciously with his horns, and it shrank bleeding milky essence.

He watched in silence as she lay twisted on the cabin floor, vomiting.

After a little while she pulled herself up and said, "I am better now. Get out and let me change."

"Change now. I am all modesty." He shoved his head among his coils.

She coughed and then sighed. "Oh, Zaf."

When she was dressed, she said, "I have started something and now it is too much, you know. I should not have come."

"Perhaps."

"But I am come, I am here. Now I better finish."

"Yes," he said sadly.

Jones slaps his hand on the cool melon-wall, no favors asked and none given, old lady...

finning his way through nave and apse while the hearts boom like organs, Roberts does not ask whether the whale loves Jonah, or consciously wish to write a poem or hymn rather than a paper on the alchemy of its digestive processes, but he does not hurry...

Takashima, adored only son of the magnate, is free for the moment of that grim warlord of the assembly line, cheerfully navigates a monster of ancient myth and finds her curiously gentle...

Gentle.

Elena sighed.

"I must tell the men...something. They should leave, and I have no authority to force them off. Listen — I think the hearts are changing rhythm. I must be mistaken; I could not have gotten to know them that well."

"Oh, but you did. Everyone does. I told Amsuwlle to reroute the blood away from her weakened artery."

"That was kind of you, under the circumstances," Elena said.

"Under the circumstances we need all the safety we can get."

"Lady, you must think we're fools. We can't leave the ore here for anybody to take." Jones was working at keeping his voice down.

"The *Limbo* is pacing us. She'll make sure nobody takes the ore. Nobody has even tried for forty years."

"The *Limbo?* Spying?"

"No. Only making sure we are safe. We are not safe. Amsuwlle has become a hostile environment. Zaf has told you."

"There was no hostility till you came," Roberts said.

"Then let us say she does not care for me. I am the wrong person for the job, and it was a mistake to send me. I cannot help that, but it seems to be true. I came in peace, but she seems to consider me a threat because I must ask you to leave if there is any danger here. She cannot bear that because she depends on you, perhaps too strongly. If that has made her hostile, then she is a threat, and I must ask you to leave even if it is my fault. I cannot force you. All I can do is ask, even beg. We must get off!"

"Even at the cost of everything we'd have to leave?"

She held out her hands. "I tell you, there is no other choice!"

Roberts gave the table a hard slap. "Get off if you like, and take anyone you want with you. I waited three years for this chance, and I'm not giving it up now." He got up and left. Jones followed with a dark angry face.

Takashima shrugged in confusion. "I don't know what is happening, but I like life. I help anyway I can."

"You can," Zaf said. "Contact the *Limbo* by radio, tell them to alert the ESP and stand by. I will instruct you, but I think it best that I don't try to do it myself right now."

"This is stupid." Elena wiped her forehead. "Threyha's one of the strongest ESPs in the Galaxy. She should be alert."

"You know how Khagodi are. She is far too busy to send her friend Zaf little messages of love. I am lucky if she gives me a tenth of her mind for a moment once in a while." He did not have enough power to reach the ship by himself and was sensitive about it.

"I am foolish and ungrateful. I did not thank you for saving my life."

"Disregard it. Just arrange your mind for me, please. It is confusion."

"I would like to arrange it for myself."

"If you wish to finish the work, my dear, and give Threyha a pro tem report, you had better do it before all hell explodes."

"Yes...I know." The pulses and their cells were butting against the walls.

Elena rapped her head with her knuckles. "When I came on board, the men realized they might have to leave, and they became quite upset...in the case of Roberts the journey was a great privilege, for Takashima a holiday he longed to have, for Jones his main livelihood. That is reasonable. But then also, I believe, they suffered from the last twinges of an old Solthree superstition that a woman brought

bad luck to a men's working ship...and now, in a way, they have made it come true...

"Amsuwlle has just enough sense to absorb this...and she dearly loves, as you say, to please them. You became the unconscious channel and reinforcement of their uneasiness — of course you cannot help that — and she became disturbed. She finds all of this feeling an irritant and wants to eject the cause of it, me, and the instrument, you. That is simple emotional mechanics."

"They are the ones whose emotions began this cycle, and she is not attacking them."

"I think you have a different relationship with her. Theirs is a more primitive male-female relationship, based on a psychodynamic concept of Solthrees and a few other races, they call it Edipo — oh, I am so tired I can't remember what they call it in *lingua* — yes, Oedipus complex."

Zaf absorbed that for a moment and chuckled with a burble of gills. "How amusing." He was an egg-laying hermaphrodite.

"Yes, very." She rubbed her eyes. "Has Takashima reached them?"

"He is broadcasting. Go on."

"That is all there is to say about the situation here right now. It will clear up when we leave. But it is the future I am worried about. Men tend and use machines and think of them as if they are female; they ride and tend the Amsu as if they are machines — but Amsuwlle is no machine, she is living matter, she *adapts* for them, grows extra hearts, redirects her blood supply, her musculature, her liquids...not in normal evolutionary patterns, nor by the eugenic principles men use to breed cattle, but only because their attentions give her a feeling of well-being...she does not adapt for her survival, but for theirs. Will a redistributed circulatory pattern improve the quality of her offspring? If she synthesizes drugs, what will that do to her heart actions?...On Solthree they breed an animal called a dog for household pet, and sometimes a dog will attach itself so strongly to its owner that when he dies it will not eat or sleep but simply pine and languish until it dies as well. Then men write tearful songs about the faithfulness of the poor creature, but it has simply been destructive of itself and disturbed the evolutionary pattern of its species...

"Fifty years ago there were between eighteen and twenty-two Amsu circling Apikiki. Every few years the breeding cycle slows down, and they conjugate to interchange genetic material — but fifty years in the progress of even such a big, slow animal should give you more than your present

population of twenty-five with all the scraping of arteries and egg spraying and patching of aneurysms...only two eggs in this huge beast, and one is malformed. What does she care? Men are caring for her, and they are satisfied with what they get. Eggs can be placed anywhere, and if necessary men will lead her to the ice and the ores..."

Before she could say another word they floated gently to the center of the room.

What —

And slammed against the side wall. Elena cried out at the bruising of her shoulder; Zaf had been driven into a knot and was struggling to untangle himself. Vibration pushed them jaggedly to the opposite wall, then sliding into the ceiling.

:She has stopped spinning.:

Zaf untwined himself; Elena wiped blood off her mouth from her bitten tongue, droplets hovered in a cloud round her face. "What?"

Zaf grabbed at his tank, floating a meter away. *:Breaking radio contact...shooting her jets in irregular vapor pattern.:* He snorted an air bubble out of the tube. "White noise field."

"Do something, Zaf!"

"Like what?"

The hearts went *boom, whicker, thack-thack;* the mesenchyme cells butted their snouts on the walls; the waters roared all about them.

"Takashima?"

"He has air, but the radio is under a heap of wet gravel. The others are knocking about in the jelly near the egg chamber."

"Those things will get at them."

"She has no time to bother with that." Zaf hooked himself onto a handhold, yanked open a locker door, and got out the cauterizer he would have used to repair the weakened artery. He slipped a new power cell into it.

"What are you doing?"

"Taking a precaution." He ran the white-hot beam around the frame of the plastic cabin door.

"But, Zaf, you're sealing us —"

"I am sealing her out." The valve beyond opened, and water struck like a fist. The door buckled, shuddered, and held. "Just in time."

The lights went out. "Ventilation will go next," Zaf said. "You will want oxygen." He found tanks in the locker. The luminous arrows, colors of lightning, swarmed and swarmed outside the cabin.

Elena sucked on the dead air of the tank. *:It is a good thing you know what to do in emergencies, Zaf.:*

He said nothing to that, and perhaps it was not the time to ask how many such emergencies there had been. Amsuwlle's entire orchestration of living matter, hearts, waters, cells, rock and ice

fragments, was breaking against the frail plastic shell.

Another lurch and the sealed door became their floor.

:She is changing course.:

:Can the Limbo *follow?:*

:If Takashima made contact — oh, Great Heavens, she is expelling the faulty egg to lead them off course!:

A wrenching shudder filled the whole body —

:— and oh, the Heavenly Shell, the other has gone with it, it has gone...:

The light came on, the air freshened, the internal tempest died down into the endless beating of hearts. Floor became floor, and Amsuwlle spun to her own unknown destination. She had made a choice and had chosen her crew.

Zaf, in a rage, jittered up and down, bouncing on the spring of his body. "She has lost them both! She is shattered and wrenched, and I am done!"

"Zaf, please!"

"Everything is ruined, and I am lost! Oh, why could you not have stopped this?" He sprang toward her and ripped off her mask. "Why?"

"Zaf!"

"The eggs are gone, we are lost, going somewhere out into space where we will all starve before she lets us go — no *Limbo,* no radio, no base — all my responsibility — and no help! All you can do is say please, please!"

Elena, completely disoriented, could only stare at him.

His tail rose, the blade snicked and touched her shin. "Look at me. Have you ever read my psych report? You did not think it necessary? It says I am a man of great courage, intelligence and resourcefulness, very sympathetic to and fitted for work on Amsu. On Amsu. You understand? Do you see me sitting in an office at GalFed Central with my coils in knots and my sulfur mud dripping all over? Or hopping about city roads like — like your toy, a pogo stick? or flying an airship or starship — without hands? Do you?"

She said nothing, and Zaf, her friend of twelve years, drew a light line with his blade under her chin toward the windpipe. "You do not understand."

She found a voice. "Do all those other ESP liaisons feel so lonely and unfitted on all those other Amsu, and patch them up and play down the reports, and ride them for their pride?"

"I am the only man of my world to become a GalFed official."

"And my family worked half their lives to send one of them to the stars." She put her hand on his head between the horns and pushed the sharp slicer out of her mind.

"Oh, Zaf, you asked me to come."

"I asked you..." the blade did not waver, "and Par Singri is not sick; he is only a little man who thinks little square thoughts and feels he has done something brilliant when he fits them into a big square. I convinced Threyha to send you...because I saw how things were going...you were my friend... and I thought you would be able to stop it before everything got ruined."

She tried not to think of her husband at GalFed Central or her family who had worked so hard in a hard land; her hand rested lightly on his head. "I am sorry I have failed you. And I am sorry for Amsuwlle."

"I am not. She would not have cared if she had killed me, and I have thought only of myself." The blade withdrew and he bowed his head. "That is what is so terrible." He flung his head from side to side. "The eggs are lost and we are going nowhere! And — oh, Elena, the men! They are still in the egg chamber!"

Both of them were clinging to the tattered rim of the chamber wall; their oxygen tanks were nearly empty, and they were shivering almost hysterically with chill. They would not have been there, or anywhere else, if part of Amsuwlle's intentinal tract had not given way when the eggs were so violently ejected and filled the egg chamber and blocked the now flaccid ovipositor with rock, silt, and coagulating protoplasm. The stuff had not quite stopped and was still pushing outward with slow but glacial force.

Zaf wound his length about Jones and Roberts and hooked his way by head and tail like a climber of ice, in slow steps backward; his mind, wide open, broadcast his misery and despair.

Back in the day room they stared at each other with haggard faces.

"I suppose you were right," Roberts said. "We should have tried to get off earlier."

"It doesn't matter," Elena said dully. She sighed. "We'd better see if we can't get Takashima."

The room was a mess; Zaf had used his blade to reopen the door, and no one worried about locks and valves any more. Locker doors had broken open with the violence of Amsuwlle's writhings; tanks and canisters were dented or burst. "We don't have much food," Jones said. Packages had spilled, their contents fouled with splatters of mud. "It won't matter for very long, will it?"

:Oh, don't give up hope quite so soon, my dears.:

Jones yelped. "Ohmigawd, what's that?"

"Be at ease, gentlemen," Zaf said without much relief. "That is Threyha."

Once again the spin stopped, and they floated; once again the siphon extruded dutifully and thumped on something hard, and down through it went the rush of waters. Amsuwlle was being obedient again.

It was not easy to be anything but obedient to Threyha. In a few minutes she gave them her image in the sinus leading from the siphon. The floor sagged from her weight, upward of six hundred kilos, and there was no room for her height of three meters. She simply nudged the ceiling with her scaly pointed jaw and it shrank away, thumped the floor with her heavy tail and it firmed and flattened under her. *:I am not coming any further or the poor thing will have another rupture.:* She smoothed down her opalescent scales and stood properly erect. *:And I must get back to my tank.?* She was amphibian, but preferred water. *:Collect Takashima and come to me.:*

"How —"

:Very easily. When she let go that second egg and all that loose protoplasm, she left a beautiful trail...and when a Khagodi cannot outthink an Amsu, it will be a wet day in the desert. Now hurry please.:

While they were gathering themselves together as best they could, she got a good hard hold on Amsuwlle's ganglia and nerve networks and sent her slowly back on course. Then she flashed a few orders, and the mesenchyme slavishly arranged themselves in neat layers to replace valves and membranes. *:What a mess. She is not going to be the same.:*

"Neither will we," said Zaf.

:That can be discussed later. You are going to ride her to rendezvous.:

They left Zaf in the day room. "I suppose I will not see you again for a long time, Elena," he said sorrowfully.

:You will see each other in fifteen days at debriefing.: Threyha said from the entrance. *:Sentimental farewells are not in order.:*

There were no sentimental farewells for Amsuwlle. Elena and the men dragged themselves aboard the *Limbo* without a word.

Threyha did not have or need a voice. Her telepathy was a stentorian bellow, but always under perfect control. While she was still in the lock of her tank, waiting for it to fill with her own world's mixture of waters, she directed a beam of thought. *:Elena.:*

:Leave me alone. You deceived me. Par Singri is not sick.: She was scrubbing herself with a cloth, trying to get off the layers of silt,

sweat, dried protoplasm and other accretions of her term on Amsuwlle.

:Zaf was too proud to ask you personally when he was so frightened, and I wanted him on egalitarian terms with you.:

:Now you will have him punished.:

:Of course not. But I cannot allow him to make himself any sicker. I have a good Psychman, a methane breather with eighteen legs and blue eyes in his knees, who will cure him of the notion that his shape is too peculiar to be of use to GalFed...: She waved her arms through the water to freshen it. *:This stuff is always stale slop no matter how they aerate it...spare me from people with feelings of inferiority! Only man of his planet in GalFed! We have invited fifteen of his cousins to join us; likely they will accept, and then he will boss them unmercifully.:*

:What of me? I have not done very well.: She thought of the great wounded creature, half killed with kindness, wrenched out of shape and aching with bewilderment.

:You spoke when necessary and shut up otherwise. It's what you are paid for. I will put forward your recommendation that we implant the Amsu with robot monitors and except for emergencies service them at rendezvous. Otherwise let them take care of themselves. Now you deserve a good sleep, because in twelve hours you are going to board Amsumar: we have a low-priority emergency —:

"Oh, no!"

:—from the ESP, who happens to be my nephew; he is a bright sensible boy but a bit frantic. It will take you a day or two to cool that, and we will be back in good time to meet with Zaf and Amsuwlle. You would say there is nothing like getting into the water again to cure a fear of drowning.:

:Threyha, why do you not simply take over the universe?:

:I hate authority. And of course no other Khagodi would obey me. One last thing: aside from my nephew the crew on Amsumar are all female beetle types from Procyon-something, and you will not have to worry about being considered a — what do you call it? Jinx or Jonah?:

"One is as good as another," said Elena, and fell asleep.

There are at least three Michael Moorcocks.

Moorcock 1 is a prolific hack, author of an unending stream of sword-and-sorcery novels. Moorcock 1 is a close student of the market; he recently discovered that his books sold better if they had "sword" in their titles, and, drawing the obvious conclusion, has begun loading his titles with phallic code-words, producing books with names like *Sword of the Bull Tower*, or permutations thereof.

Moorcock 2 is the energetic promoter of avant-garde speculative fiction. As editor of *New Worlds*, Moorcock 2 transformed a conventional science fiction magazine into an impressive large-format journal with advanced graphics and even more advanced contents, the house organ of the British New Wave. The editorial policy of Moorcock's *New Worlds* could be roughly described as unlimited enthusiasm for everything John Campbell loathed. This led to the publication of large amounts of pretentious garbage, but also to the appearance of some very fine, though highly unconventional, science fiction (e.g., *Camp Concentration*, large parts of *Barefoot in the Head*). Before *New Worlds* died at the hands of

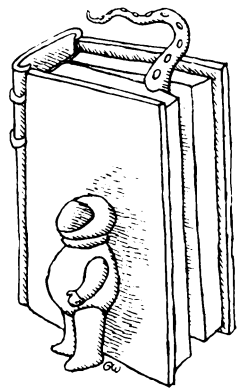
SIDNEY COLEMAN

Books

An Alien Heat, by Michael Moorcock, Harper & Row, $4.95.

The Man Who Folded Himself, by David Gerrold, Random House, $4.95.

Final Solution, by Richard E. Peck, Doubleday, $4.95.



malicious distributors, it had played a major part in the Great Redefinition of the late sixties. (An anecdote of this period: An American visitor once said to Moorcock, "Mike, I should really subscribe to *New Worlds*. Half the stuff in it I can't understand, and of the part I can understand, half I hate, but it looks so impressive on my coffee table." "I know," Moorcock said. "So many of our readers have that attitude that we give away a free coffee table with every subscription.")

Moorcock 3 is a talented writer of science fiction, the fellow who wrote *Behold the Man* and *The Dark Corridor*.

Of course, there is really only one Michael Moorcock. This is the problem, for Moorcock 1's slovenliness and Moorcock 2's weakness for functionless countercultural razzle-dazzle keep infecting Moorcock 3's novels. An example is Moorcock's latest book, *An Alien Heat*.

An Alien Heat is set in the very far future. The universe is in bad shape; the End of Time is approaching. On Earth, though, everyone is having a high old time. *An Alien Heat* opens with a quotation from a *fin-de-siecle* decadent poet and a dedication to a rock group; this is fair warning, for the inhabitants of Moorcock's future Earth, heirs to millennia of human culture, masters of unlimited power, virtually immortal, turn out to be curious combinations of *fin-de-siecle* decadents and rock groupies: languid party-goers, bored sensualists, practitioners of the peacock-show and the put on. One of them, Jherek Carnelian*, decides on a whim to experience the antique sensation of falling in love; as the object of his affections, he picks an involuntary time-traveller from Victorian England, Mrs. Amelia Underwood.

Now, this is as silly a plot-premise as any seen recently, but this time the silliness is deliberate; Moorcock is not playing the End of Time for awe and wonder, the usual practice, but for laughs. Most of the time he does this with deftness and ingenuity, and sometimes he is able to work some wonder into the comedy for good measure, notably in a description of a grotesque party given by the Duke of Queens. (Moorcock's futurians have unfortunate Funny Names.) Unfortunately, Moorcock is not careful enough in fitting together the pieces of his imagined society; the result is that it begins to slip out of

Yes, just like Jerry Cornelius in The Final Programme, *or Jerry Cornell in Moorcock's spy spoof,* The Chinese Agent. *What is this obsession? Don't ask me; I'm Jewish.*

focus as the book progresses, and Moorcock's clever jokes begin to lose their point.

For example, at the beginning of the book, Jherek, who fancies himself a student of history, discourses on the difficulty of understanding the ancients, who "divided their sensations into different groupings — categories of sensations, some of which they did not find pleasurable, it seems." Jherek, of course, finds all sensations pleasurable. This strikes just the right nineteenth-century decadent tone, somewhere between middle J.-K. Huysmans and early Max Beerbohm. Alas, it is impossible to motivate a novel whose characters really think like that, so Jherek is soon pursuing pleasant sensations and avoiding unpleasant ones, just like those incomprehensible ancients.

Again, Jherek and his friends have as fuzzy a concept of history as the late C. B. DeMille. This is the basis of many jokes, such as:

> Lake Billy the Kid was named after the legendary American explorer, astronaut, and bon-vivant, who had been crucified around the year 2000 because it was discovered he possessed the hind-quarters of a goat. In Billy the Kid's time such permutations were apparently not fashionable.

In the same vein is a long list of scrambled famous lovers ("Romeo and Julius Caesar. Windermere and Lady Oscar. Hitler and Mussolini"). Yet, when Jherek takes a time-trip to Victorian England in an attempt to find the missing Mrs. Underwood, he is sent off with this speech: "Speed through the hours, my Horos!...as Hitler sped to Eva. As Oscar sped to Bosie!" This is funny, but, in addition to being something of a repetition of the previous joke, it is also a contradiction of it; the two are not the product of the same imagined culture, and don't belong in the same book, unless it is a joke-book, not a novel.

For all its slovenliness, though, this book is full of good things, and original ones, too; Moorcock (at least in his incarnation as Moorcock 3) is not much like other science fiction writers, and his books are not much like others' books. So I suppose, on balance, that I would rather have *An Alien Heat* with all its flaws than not have it at all. But still I cannot help wishing that Moorcock would just once sit down and take his time and work things out more carefully and less flashily, and write a book I could praise with fewer qualifications.

The story of time paradox is a very special form of the story of

time travel. In a typical time travel story, time is really just another spatial dimension; you go to the Byzantine Empire to have adventures, just as you go to Andromeda. The characteristic paradoxes of time travel, the closed causal loops, the events that cancel themselves out, are ignored or papered over, or perhaps invoked on rare occasions to give a jolt to a flagging plot. It is strange that there is not a richer literature of hard-core time paradox stories, stories in which the paradoxes are central; after all, there is nothing like a closed causal loop for making your head feel funny, and making your head feel funny is one of the main functions of science fiction. Perhaps the subject is an inherently limited one; whatever the reason, the literature of time paradox consists of two monuments erected by Robert Heinlein ("By His Bootstraps" and "All You Zombies"), a handful of lesser stories, and vast amounts of drivel and trivia.

There is now a new addition to the small canon of good time paradox stories. It is *The Man Who Folded Himself*, by David Gerrold. (Yes, David Gerrold the tribble-monger. The world is indeed full of surprises.)

The Man Who Folded Himself is dedicated to Larry Niven and shows his influence strongly. Niven has stated that ingenuity is the prime virtue for a science fiction writer; for Niven, the development of a science fiction story is primarily the development of an idea, the exploration of variations, the working-out of unexpected consequences. This is the principle on which *The Man Who Folded Himself* is constructed. Gerrold has started with one of the standard models of time travel, and has sent his protagonist looping through time systematically demonstrating its consequences. Most of the time Gerrold is rigorously fair to his premises, and most of the time he is nevertheless able to draw surprising conclusions from them.

I'd like to expand a bit on that "most of the time," because I think there is one point where Gerrold has tripped over his own feet while criss-crossing time; readers uninterested in the theory of time travel may skip to the next paragraph. Gerrold's world is one in which you *can* change the past; that is to say, the universe does not have a unique future. In accordance with common experience, though, it does have a unique past; nobody walks around with two contradictory sets of memories. This leads to the standard picture of the branching universe: The universe develops in time in its steady way, until a time traveller arrives from the future, whereupon it splits into two universes, identical in every

respect except that one contains the time traveller and the other does not. A map of the whole thing would look like a tree, branching more and more as one moves futureward. (Actually, Gerrold says the universe doesn't branch; the time traveller arrives in a completely different universe with an identical past to his own. But this is just a novelty of nomenclature; if the two universes are identical, we might as well say they are the same, with no loss to anything.) So far, this is standard stuff. But what happens if a time traveller leaps into the future, beyond a branching point? One possibility would be for him to be duplicated, and for a copy of him to appear on every appropriate future branch, just as would have happened if he had travelled to the future like the rest of us, at the dull rate of one second per second. This seems to be the way things work for most of Gerrold's book; his hero can visit the future and see the effects of the changes he has made in the past. However, it is crucial to one part of Gerrold's plot that this is *not* what happens; here he says that a time traveller returns like a homing pigeon to his original branch. I don't think these two phenomena can be reconciled.

The Man Who Folded Himself is written in flat, declarative, gee-whiz prose, with lots of one-line paragraphs, rather like an old-time Hearst editorial. Since all of the book (except for a few interpolations and a frame at the beginning and end) is purportedly the journal of a callow young man named Danny Eakins who never matures emotionally, this is a perfectly appropriate voice, although it does get a bit embarrassing sometimes, as in the following, when Danny contemplates his own death:

> Cease to exist.
> Cease to exist.
> The words echo in my head.
> Cease to exist.
> Until they have lost all meaning.
> I try to imagine what it will be like.
> No more *me.*
> The end of Danny.

At this point it is a tolerant reader who will not say, "the sooner the better."

Emotionally, time travel has two faces: the bright multiverse of infinite possibility, and the grim infernal machine of closed causal loops. In the two stories I mentioned earlier, Heinlein looked at the dark face; both "By His Bootstraps" and "All You Zombies" are solipsist nightmares, the first implicitly, the second explicitly. *The Man Who Folded Himself* starts out full of bright

exhilaration, but gradually darkens into another version of the solipsist nightmare. With all of time at his disposal, Danny spends most of his life looping back and forth over the same few months, filling a small portion of space-time with duplicate Dannys, in order to play with himself at a life-long party punctuated by auto/homo-erotic orgies. Danny has one great tragic romance; it is with the only woman he could ever love, an alternative version of himself, born female on a distant branch of the time-tree.

I said this story has a frame; at the end of the book, we learn that the journal we have read has been taken by old-Danny from dead-Danny and given to young-Danny, along with the wonderful timebelt. Young-Danny has read the journal and, unlike us, he is not horrified but deeply touched. He says, "I feel a wonderful empathy for that beautiful old man." Of course; what else *could* he feel? Even in a multiverse of infinite possibility, you only get out what you put in.

Despite the frequent patches of bad writing, this is an astonishingly successful book. Maybe Larry Niven is right; maybe all you really need is ingenuity.

•

The hero, a man of our time, awakens from suspended animation to find himself in a drastically altered future society. Its inhabitants are at first strangely reticent, but after a few chapters, when the reader is safely hooked, they change their ways, and give the hero long lectures, with slides and demonstrations. By a strange quirk of fate, the hero finds himself the focus of contending forces, each of which hopes to use him to resolve its long-standing power struggle with the others. At first he is as innocent as a newborn duckling, ready for imprinting by the first mother-duck surrogate to waddle his way. As the novel progresses, though, he masters the situation, outwits the contending forces, wins the love of a good woman, seizes control, and begins the salvation of the world.

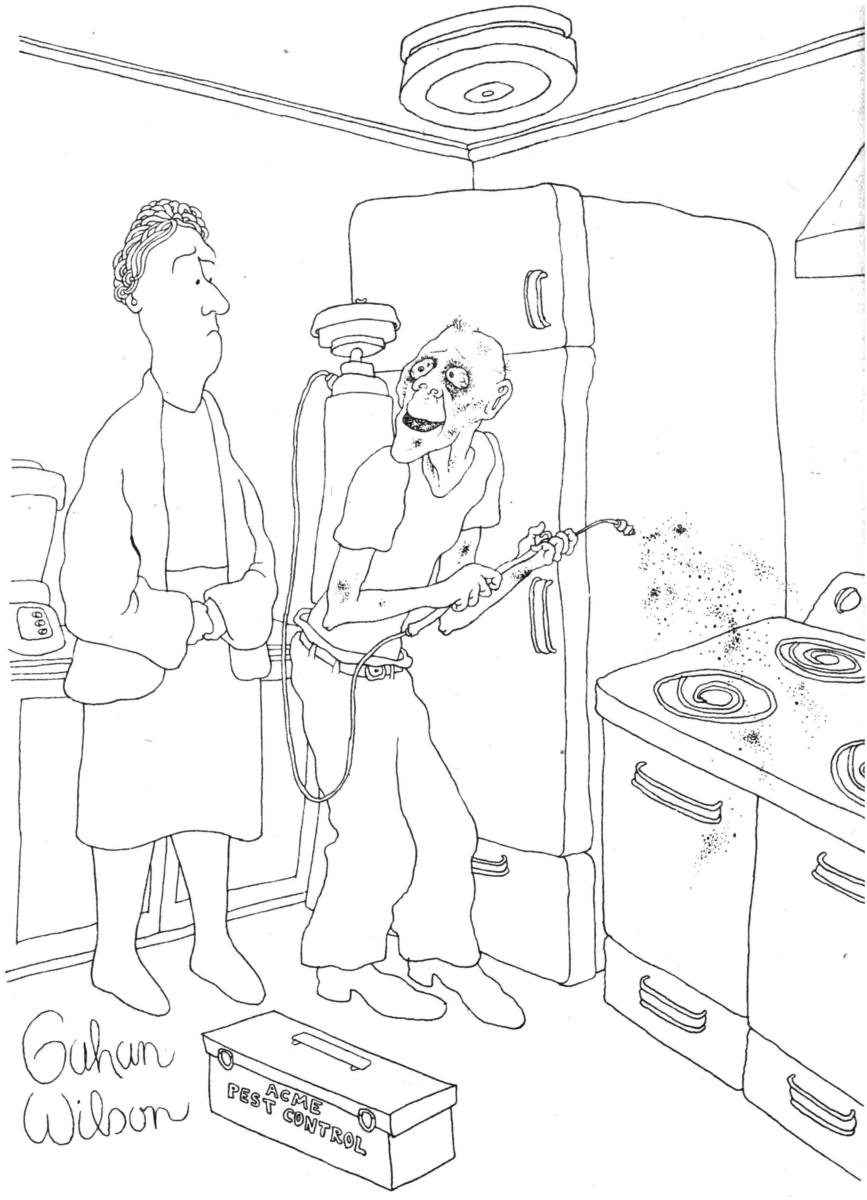
This is the basic plot of *Final Solution*, by Richard E. Peck. It is the Volkswagen of science fiction plots. Unchanged in basic design for many years, aesthetically uninteresting, clumsy, and underpowered, it nevertheless offers great advantages: it is cheap, sturdy, reliable, simple to operate, and made of widely-available mass-produced parts. It can carry whatever you want (if it is not too large nor too heavy) wherever you want to go (if it is on a good road).

In the case at hand, what is being carried is a satire on certain trends in American life, mainly in American academic life. (The principal setting of *Final Solution*

is a university of the future.) Among Mr. Peck's targets are student violence (assassination is an occupational hazard of university presidents), "third world" consciousness (faculty members are expected to speak a fossilized version of contemporary Black English), the rage for relevance (among others, there is a professor whose "pioneering work in Engine Repair had drawn accolades from progressive educators throughout Detroit"), and, in the larger world, the awesome autonomy and power of the Director of the FBI (who is still, by tradition, called "Mr. Hoover").

As you have probably noticed, these are hardly current trends. The campuses have been quiet for several years, Black Studies courses are in deep trouble, enrollment in freshman physics and chemistry courses is skyrocketing, and the autonomy of the Director of the FBI has been fed into a paper shredder. One might say that this is just Mr. Peck's bad luck; books take time to write and publish, and the world changes. I think not; *Candide* is still fun to read, and *Dr. Strangelove* to see, for all the world has changed since they were made. Good satire cuts to the bone, but to cut to the bone you must first see the bone, beneath the flesh. Good satirists see deep; this is why their works are so funny (since deep insights are surprising, and surprise is important in humor), and why they do not date easily. Bad satirists see cliches; this is why their works are dull, and why they are dated on the day of publication. (They write cliches, too; *Final Solution* has characters that hover like mother hens and rooms that are riots of colors).

One last thing: In a review of this kind of book, there is always a suspicion that disparagement of style is a mask for disagreement with content. Therefore I should state that, like Mr. Peck, I teach at a large urban university, and that I agree with most of his opinions, as do many right-thinking persons. Unfortunately, right thinking is not satire; if it were, Norman Cousins would be Jonathan Swift.



"Oh, no, Ma'm — I can assure you the spray is perfectly harmless!"

In order to satisfy the many requests we've had recently for more irrelevant sf, we offer this jungle adventure tale which features a mad scientist, panther men, dog men and assorted monsters. Enjoy.

The Beasts in the Jungle

by GORDON EKLUND

Running faster than ever in his life, August Rupert spied a sudden opening through the thick jungle foliage and made desperately for it.

His khaki jungle suit — purchased in Hollywood at a cost of nearly three hundred dollars — hung about him in torn ragged shreds, and not only was his hair irreparably mussed — resembling a briar patch, filled with leaves and thorns and burrs — but it was also drenching wet, dripping mud into his eyes. Kilometers back, he had lost his shoes; and now, streaking breathlessly out of the jungle and across flat cleared ground, his bare tender feet caused him to wince painfully with each thundering step.

The thing chasing him, Rupert thought, was either the devil or a very near relation. It came sprinting out of the jungle only a few yards behind, moving close to the ground, knuckles dragging. The thing was shaped vaguely like a man — tailless, with hair only in the proper places — but there was too much wrong with it: the arms were longer than the trunk, the legs stooped, the voice grunted and squawked, and the eyes — when Rupert had seen them close-up — glinted with a strange light no human being possessed.

And he knew it was going to catch him out here on the open ground.

He moaned, realizing his strategic error. Then, glancing up, he saw a sight that made him laugh aloud. Directly ahead stood a high wooden fence that ran in a circle, and in the center of this fence, clearly visible, was the heavy plank roof of a house. He tried to shout, knowing that only another human being could possibly have erected such a structure — the devil did not

need a roof — but his voice caught in his throat.

A gate opened in the fence. Rupert headed that way. Through the gate, a face appeared, shouting, in clear English: "Hallo there!"

The sound of such familiar words spoken in this utterly alien place gave Rupert pause. Doing so, his feet came down heavily upon a narrow log. Suddenly, the log moved, hissing. Rupert spun away from the snake, losing his balance. He struck the ground.

The snake calmly undulated off.

But — a moment later — the devil creature was upon him. Its lips smothered his. He tried to scream, tried to escape that foul breath with its ghastly odor of the deep jungle. Brutal fingers stroked his bare genitals — not tenderly — making him yelp again and again. The thing fell flat upon him, powerfully strong. He could not move. He knew he was being raped. Again and again, he twisted and screamed, taking his pitch from a young actress with whom he had often worked — a fragile blonde who specialized in scenes of rape.

Then a voice utterly calm, like that of certain saints. "Beebo — I say, hey. Up there — move." And he heard a sound like a shot. Pain sliced across his thigh. He screamed again — the pitch was his own.

But the weight came off. His lips and genitals were set free. Moaning, he forced open his eyes, squinting against the fierce African sun.

A face hung over him. "I apologize for Beebo," it said, pink and plump with a hairless skull. "I intended to whip the devil but struck you instead. Little Beebo is too quick."

"What?" Rupert accepted the pink man's assistance, gaining his feet. "Where is it?"

"Back to his lair," the pink man said. "The jungle bush." His head stood a dozen inches below Rupert's. He wore shorts, khaki brown; a pith helmet swung at his side. He replaced the whip at his belt. Rupert glared, recalling the last indignity. "They all fear me," the man said, placing a steadying hand upon Rupert's bicep. "Being American, I imagine you also fear your god."

Rupert, recovering rapidly, stuck out a hand. "Not American — British. August Rupert. You've heard of me."

"Never," said the man. Their hands met, shaking slightly. "I am a doctor. This island is mine. Your friends are waiting for you."

"They survived?" asked Rupert, disappointment saturating his tone. All night and day, staggering through the hot, wet jungle, great red headlines had appeared to him

in constant visions tattooed to the trunks of huge trees:

HOLLYWOOD SHIP SINKS OFF AFRICA! AUGUST RUPERT FOUND ALIVE! WHOLE WORLD SIGHS IN RELIEF! RUPERT OFFERED NEW CONTRACT! ONE MILLION A PICTURE

"All but the captain, I understand." The pink doctor led Rupert into the settlement. "He went down with the ship."

"Good man," said Rupert bitterly, recomposing the headlines.

"I would guess."

"By the way," said Rupert, his thick, heavy Oxfordian accent now firmly in place. "Tell me, old chap. That devil which gave me such a fright. What was that?"

"A baboon man — a creation of mine. Science," the doctor explained. "Like many of his race, I'm afraid —" he whispered this last "— as queer as a tin silver dollar."

"But —" said Rupert.

"He's in love with you," the doctor said calmly. "A race of genuine high passion."

"I see," said Rupert, who had experienced such perverted affection in the past. "But — a baboon man, I believe you said."

"Strickly a layman's term. Pay no mind to it."

"Of course," said Rupert.

The settlement appeared more than adequate, considering its foresaken location. The central house would not have appeared wholly amiss in the English countryside. Two smaller houses flanked the larger structure, one made of brick and surrounded by a tall barbed wire fence. The doctor led Rupert toward the other — a fair-sized wooden hut.

"I live here alone," the doctor said. "The private life is the thinking life, don't you agree?"

"Most definitely," said Rupert.

"But here —" opening the door of the hut with a key "— are your companions."

Rupert hurried through the door, failing to notice that the doctor did not follow. The others were seated around a bare table. Carefully, Rupert counted : all had indeed survived.

The others were less calculating in their reactions. Melody Carr leaped to her feet, squealing. Stanley, the writer, proclaimed, "Good Christ!" And Buchner, standing, exclaimed in German and shook a fist at the sky.

Rupert headed immediately for Buchner and took his hand. "I am saved," he announced. Then, rolling his eyes, he sank to the floor.

"Water!" cried Buchner. "This man has fainted!"

Through half-open eyelids, Rupert observed Melody Carr

murmuring a prayer. Promptly, she too proceeded to faint. Silently, Rupert cursed her stupid theatrics. When Stanley came over and dumped a bucket of freezing water upon his face, Rupert danced to his feet, dripping wetly and swearing lividly. Melody Carr, abruptly waking, giggled uproariously.

Behind the hut was a small room where Rupert was able to refreshen himself. After a cold shower and a dull shave, he felt more eager to talk. No one's clothes had survived the wreck, but Buchner gave him a khaki suit provided by the doctor which, oddly enough, fit quite well.

Then all of them sat around the table and traded stories. Stanley and Melody spoke for Buchner. It appeared they had all managed to swim ashore within a few yards of each other. Observing the lights of the settlement, they had come and roused the doctor, who had offered them shelter. Rupert stated that he must have come ashore farther down the coast, for he had seen no lights. Stanley said this was because Rupert had leaped overboard long before the others. Rupert related the shocking tale of his jungle ordeal: the shining eyes and ghastly noises of the night. He failed to mention the baboon man, preferring to forget the humiliating matter.

"And this doctor chap," he said, when it was clear the others were no longer listening. "I presume he is some sort of medical man. Like that German — Schipzer. He devotes himself to the suffering natives."

"There are no natives on this island," said Stanley.

"But he does have radio."

"Oh, sure," said Stanley. "He's got a hell of a rig. But none of us is going to get close to it."

"What's that? The doctor seemed a decent enough chap to me."

"Big nose over there," said Melody, indicating Stanley. "Went and stuck it in where it didn't belong."

"I told you I was only trying to find out if he had any booze," Stanley said. "I can't help it if Hollywood has shot my nerves." Stanley turned to Rupert: "The good doctor is a mad scientist."

"Oh, I beg of you," said Rupert.

"No need to soil your knees. It's true. I was the big nose —" he glared at Melody "— who got to see. That brick building with the barbed wire around it: a monster-making factory."

"Oh, come now," said Rupert coldly. "Monsters?"

"The usual type, I imagine. All I saw was a lot of blood and a shape on the operating table. And a big

knife. Damn glad he didn't decide to turn that knife on me."

"I'm not so darned glad," Melody said. "Then we wouldn't be stuck here."

"Oh, feathers," said Rupert, standing. He made his way toward the door. "I'll simply confront the man and demand the use of his radio."

"If you can walk through wood," Stanley said. "The door's locked."

Tentatively, Rupert wiggled the knob, discovering in this instance that Stanley spoke the truth: the door was indeed firmly locked. He pounded and shouted.

"Hey," said Stanley. "I'm trving to think."

"Shut up with the noise," Buchner muttered.

Of them all, only Melody had nothing to say. She simply stared at her own bare feet, her ethereal face smeared with a glittering smile. Then, suddenly, she began to hum a tune. Shortly, she sang aloud: *Swing low, sweet chariot.* For inexplicable reasons Rupert shivered as though crossed by death. Turning from the door, he went and sat with the others. Melody fell silent. Not a word was spoken. Then, from without, an awful wailing howl arose to pierce the silence of the afternoon.

Softly, without dramatics, Melody Carr began to pray.

Ernest Buchner stared at the heaping steaming plate of suckling pig which had been set before him and struggled to prevent the nearly vacant pit of his stomach from immediately revolting. Holding his mouth and nose, he turned desperately to his host and voiced a muffled plea: "Sir, please — I am —"

"Oh, good Lord!" said the doctor, slapping his forehead. "Leopa, remove that plate at once. Quickly!" The servant, a slim Negro of uncertain age, did as directed. "Sir," said the doctor. "I must apologize. None of the others, I hope..."

"No," said Buchner, taking deep gasps of pure air. "I'm quite all right now. It was the proximity of the meat..."

"I'll have my man bring you a plate of greens. Leopa, quickly! I really ought to have known."

Stanley grinned with unconcealed good humor while Melody and Rupert looked away, plainly embarrassed. Buchner silently cursed their crass American Protestantism and wondered how they dared demand that he ignore the rigid constraints of his upbringing. "My head it is most modern," he confided to Melody beside him. "But my stomach sticks to the old ways."

She had nothing to say.

They proceeded to eat in

silence, Buchner picking carefully at his meal. Lettuce was hardly the necessary substance for a man half starved. He glared at the others as they eagerly wolfed down their suckling pig.

Had he been a man of any humor, Buchner might have joined Stanley in laughing at their present predicament. But, truthfully, he was anxious. For the hundredth time in the past twenty-four hours, he made himself a private vow: *When this is over, I shall return to where I belong. Germany, you shall once more greet your Ernest Buchner. Enough Hollywood is plenty for me.*

But he was thousands of miles from Hollywood and could not help recalling the home he had occupied in the hills of Beverly, as big and plush as any castle along the Rhine. And he remembered the servants and the many kind ladies and the five hundred thousand dollars a year and the New York stock market and the photographers and the endless summers. All of this simply for doing not so good what he had once — in Germany — done so very well; that is, making the pictures that moved. And, too, in Hollywood, they called him an artist, though he knew he was merely a businessman, while in Germany he had been a businessman since only writers and painters and musicians were permitted to be artists there. Then, too, Hollywood already had its fair share of businessmen and needed a few artists. Also, his most recent picture, *The Gentle Orphan*, based on an obscure operetta muchly beloved by a certain studio boss, had failed to make a profit, and, in Hollywood, only artists ever failed; everyone else made vast fortunes with each turn of the clock.

Not that he was bitter. No. Not that he minded that they (the businessmen, the studio bosses) had forced him into this present stupid project, insisting that only a genuine artist could venture into the heart of the African wilderness and return with a real masterpiece of motion picture making. Sometimes, though, he did suspect sabotage, especially when he recalled how he had been forced to accept this Melody Carr and August Rupert as his cast. And then that illiterate jackass Stanley as a writer — a writer for he, Buchner, who had been writing scripts before Dr. Caligari graduated from medical school. Then the ship had gone down. Well, surely that had not been arranged in advance.

Or had it? he wondered.

"This pig," said Stanley, flashing Buchner a wink, "is like golden honey upon my starving lips."

"It *is* good," said Melody Carr.

A plot, thought Ernest Buchner.

As soon as the meal was successfully consumed, the host produced brandy and cigars which, for Buchner, almost succeeded in transforming the evening into a pleasant and worthwhile occasion. He ignored the nasty grumbling in the pit of his belly and concentrated instead upon the sweet fragrance of the tobacco. Then, at the head of the table, the doctor rose to his feet.

"I would like to make an announcement," he said.

"Hear, hear," said Stanley.

"Silence," growled Buchner. "We must hear this man out."

"I thank you," the doctor said, "but I must also admit a sympathy for this young man's sarcasm, though I must further insist that it is strictly through the error of his own curiosity that my present remarks are made necessary."

"Big nose," Melody murmured.

"And so," the doctor said, his voice rising in the crisp tones of a practiced lecturer, "after due consideration, it is my decision that each of you deserves a full explanation regarding myself, my work, and the events overseen last night in my laboratory by this young gentleman."

Stanley, glancing hastily past one shoulder, asked, "You mean we get to meet the monster?"

"Indeed you do," said the doctor, smiling. "For it is you, sir, who is in fact the monster."

Buchner took this information with a solemn nod, as though he had already guessed the truth. Stanley growled fiercely and made a move to nip Melody upon the breast. She drew back demurely and covered her bosom with her shirt.

"Leopa!" cried the doctor. "Come to me at once!"

The slender Negro, who had served so admirably during the meal, now entered from the kitchen. The group, which had barely noticed the man before, now studied his features with the utmost diligence. Buchner noted that the man, in spite of the deep ebony of his skin, failed to possess the normally simian features of the Negro. His lips were narrow, his forehead of the proper shape, and his nose was more sharp than flat. In fact, his walk, stance and bearing possessed more of the sly stealth of the cat than the dull shuffle of the ape.

"Here," said the doctor, "is one of your monsters. As you may see, he is not especially savage in appearance. The English gentleman has met another of my creatures and may, if he wishes, tell you that tale himself." The doctor snapped his fingers; the servant departed silently.

"Leopa," said the doctor, "whom you have just met, was the first of my creations. In truth, I accept a collaborator, for it was surely God Himself (in whom I most fervently believe) who provided the raw material from which I was able to fashion the creature you have just observed. I ought to begin nearly thirty-five years ago, at the turn of the last century. Had you known me then, you would have been acquainted with a certain young physician whose credentials were the best and whose inclinations were those of a surgeon. One summer afternoon — and I remember it well, the gentle heat, the soothing breeze — a friend loaned me a certain slender book. It was this volume, though fiction, which turned my mind in the direction of my life's work and eventually carried my body and soul to these alien shores."

Like many practiced lecturers, the doctor's method was indirect. Stanley began to snore audibly. Melody bumped his elbow and made a shushing noise.

"The key term," the doctor said, "of which I presume you have an understanding, is vivisection. Let us skip ahead to the present moment, ignoring the persecution I endured in my native land. I have now succeeded in taking your average animal — whether wild or domestic, carnivore or herbivore — and, with my knowledge of anatomy and bone structure — and my knife — creating a whole new creature who closely resembles that of God's own image — I refer, of course, to the image of man."

"You mean," said Stanley, who had apparently been listening in spite of his snores, "that black man just now was originally an animal."

"A panther," the doctor said.

"The baboon man," whispered Rupert.

"Exactly."

"How?" asked Stanley.

"As a layman, I'm afraid you would not understand even if I took you into my laboratory and permitted you to witness my labors. In fact, I would venture to say that even to a practiced surgeon, my methods would seem vague and mysterious as an alchemist's. Because of the narrow attitudes of most so-called civilized nations, research along the lines I have followed is strictly forbidden."

"How would you like it," asked Stanley, "if a dog went at you with a knife?"

The doctor puckered his lips with distaste. "Science cannot afford to be hindered by such foolish talk. One thing I have learned for certain in my work, a man is not a dog."

"A genuine insight," Stanley whispered.

"But perhaps," the doctor

continued, "when you hear the reason for my endeavors, you shall not be so quick to criticize. Put bluntly, it is my intention to do away with war."

"By cutting panthers to pieces?"

"Only a few short years ago," the doctor said, "a horrible war raged across the European continent. Within a few more years, I fully expect an even more dreadful war to begin. Already, the signs of its approach are painfully evident. But, when this war does come, no man will need to fight and die. His place in the trenches will be taken by my creations — dog men, panther men, leopard men. It is they who will fight and die. It is man who will stand free from his greatest and most horrible curse. True, my animal men are not exceptionally intelligent. Generals and staff officers will have to be men. But the privates and sergeants, even aviators — there my creations will find their proper niche."

"It's crazy," said Stanley.

"And when will this army be ready?" Buchner asked.

"I — I —" And the doctor sank wearily into his chair. Burying his head in his arms, he began to weep. Moved, Melody Carr rushed to console him, whispering, "There, there — it's all right — really it is."

"What is?" asked Stanley.

At last, the doctor raised his head and met the eyes which regarded him. He said, "Alas, I have failed. My creations — my children — they will not fight."

"What?" said Stanley.

"Exactly," confirmed the doctor. "They are as pacific as cowards, as gentle as ladies, as even-tempered as Negroes. But," he shouted, rising to his feet, sending Melody spinning toward the floor. Taking a deep gasp of air, he thrust out his chest and cried: "I shall never surrender! I vow that until this tired heart —" tapping his chest "— has beat its last full measure that I shall persevere in my work for the greater good of God and his flock, always striving toward the single aim of the eventual salvation of that poor race of which I am a member."

"Hear, hear," cried Stanley, bounding to his feet and applauding madly.

"God bless Mommy and Daddy and Uncle Horace and Sister Aimee and President Hoover and August and Mr. Buchner and Stanley, and, especially, please God, do try to bless the poor doctor who feels such a mighty faith in your work and who suffers so deeply from —"

Her whispered prayer smothered by the pressure of fingers upon her lips, Melody Carr attempted to scream.

"Hush," said a voice. "It's only me."

"Stanley," she said, when he released her lips. "What...? Why...?

"We're getting the hell out of here." She could barely glimpse the outline of his figure in the deep darkness, and since he was not a man she trusted, this made her feel rather uneasy. Abruptly, she felt his hand groping for hers.

"Hey," she said, pulling away.

"For Christ's sake, come on."

She followed him cautiously through the dark, listening closely but hearing nothing beyond an occasional burst of fierce snoring and, from outside the hut, the howl of the wind.

"August?" she said, referring to the snores.

"He can stay," Stanley whispered. "We don't want to run any unnecessary risks."

"Mr. Buchner?"

"He's still up at the main house. I wanted to wait for him but..."

Suddenly, a bright yellow light fell across her face. It took her a moment to realize that what she was experiencing was the moon. Directly in front of her, Stanley stood brilliantly revealed.

"He didn't lock the door," she said.

"The hell if he didn't. We've got a friend."

"The doctor?" she asked.

"Christ no. The panther man. Why do you think I spent all that time in the kitchen while you were fawning over the doctor?"

"He needed me," she said.

"Well, so do I."

He went through the door and she followed. Outside, standing in the dark, holding a faint lantern cradled near his body, stood the servant — the panther man — Leopa. Seeing his yellow eyes glistening in the blackness, Melody shivered and turned to flee.

Stanley gripped her tightly. "He won't hurt you. Remember what the doctor said. As pacific as a coward."

"I am good friend," the panther man confirmed, but his voice failed to console Melody. It was sleek — tawny — it purred at her.

But Stanley was dragging her along. Behind them, with a click, Leopa fastened the hut door, then moved swiftly past them. In the doctor's big house, a single light glimmered from the upper floor. The laboratory, which they passed on tiptoes, lay dark and silent.

They reached the gate. Soundlessly, Leopa thrust it open.

"Are you coming with us?" Stanley asked.

"Not good idea," the panther man said. "Man with the whip find me gone, get very angry. You find my people — they find you. Search jungle. No problem."

Stanley nodded solemnly and reached out and gripped the other's hand. He shook it with great feeling.

"Good man," he said.

As they moved across the flat hard ground, the jungle swelling ahead like a black boil, Stanley began to chuckle. "Did you hear what I called him?" He giggled. "I said good man."

"I don't think you should make fun of him," Melody said. "After all, he did help us."

"Only because I told him I was really a hyena man. I said the doctor was trying to force me to fight and I wanted to join my brothers. He lapped it up."

"And me?" she said. "What did you tell him I was?"

"I said you were a lovely unicorn woman. What else?"

Melody nodded lightly. The jungle loomed ahead of them; then suddenly they were in the thick of it. She couldn't see her own feet. The tops of the trees blocked the moonlight. She stumbled. Stanley caught her. He held her. She wished she had finished that prayer. She murmured, "Amen," hoping that would help.

"Hey, what have you got there?" Stanley asked, tapping her chest with a fingertip. The sound was hard, sharp.

"A book. I always carry it with me."

"Why there?" he asked, tapping again.

"It's my Bible," she said.

"Oh. Well —" pushing her away "— we better hurry."

"To where?" she asked.

"How would I know? Come on."

She went with him reluctantly. Had another alternative presented itself, she would surely have clasped it eagerly to her bosom and ran, for she loathed the jungle. The year before she had played a featured role in a moderately budgeted jungle picture. At the preview, the audience had laughed itself sick and silly over her performance. After half an hour she went home to weep the night away, praying desperately between spasms of tears, eventually realizing, as dawn painted the Hollywood hills with a godly golden light, that the director, for various obvious reasons, had deliberately ruined her performance by playing tricks with his camera and making her look stupid and silly. She never forgave him, but that performance was still her most famous. In all of her other pictures nobody had ever noticed her. It was why she had been assigned this present role. The studio president had told her straight out that the public had her typed as a jungle maiden.

Still, she didn't like it. Not now or ever. The jungle was too dark, too creepy.

But they had gone only a few hundred yards deeper into the jungle when the monkey man pounced from behind a thick tree, waving his slender arms.

Stanley stopped and explained their need.

"This way, hyena man," said the monkey man. He pointed straight ahead.

"So you have no guns or weapons of any kind," the doctor said sadly as he led Buchner up the twisting staircase, one hand draped casually over his shoulder. "Now that we are alone I believe we may converse without hesitation."

Buchner said, "To be sure," but wasn't entirely sure what the doctor intended. Nor was he exactly sure why he had been chosen to stay behind after Melody and Stanley and Rupert had been returned to the hut. It was true that he had shown a degree of interest in the doctor's work, but he hoped that mild expression had not been misinterpreted as any sort of approval. In truth, he was quite convinced that the doctor's endeavors were barbaric and, if anything, thoroughly mad.

The upper portion of the house stank with an odor of musty stagnation. Dust rose from the carpet in great puffs, but turning into a small room at the end of the corridor, the air seemed considerably fresher. The furniture here was clean, polished and neatly arranged. One wall was covered with book-shelves, but only a small number of volumes could be seen resting here and there.

"All guns went down with the boat," Buchner said, standing in the center of the room. He wanted the doctor to make the initial move.

"An awful pity," said the doctor. "My greatest difficulty, you see, lies in obtaining the proper equipment. My presence here on this island must remain a secret, and therefore I am forced to resort to the worst sort of assistance — smugglers and cheap thugs — to get even the most meager supplies. Weapons, of course, are nearly out of the question."

"But you do have your whip."

"Oh, that's not the problem." The doctor gestured toward a pair of facing chairs. The men sat. "It is my creations who must be trained to fight; yet the best I can often provide for them is a few motley sticks and twigs crudely shaped to resemble guns. I have only a single rifle of my own. You see, one pet theory of mine is that the beasts need to see and smell the color of blood before they can truly comprehend their destiny. To assist, I have slain a few of them and forced the others to observe, but hasn't been enough. I feel if they were once to get a spot of

blood on their own hands — once there, it would not soon wear off. Have you ever killed a man, Mr. Buchner?"

"Never."

"Nor have I. You see, we share much in common." Abruptly, from some concealed nook, he produced a bottle of brandy and two sparkling glasses. Pouring slowly, he visibly savored the gurgling sound. "Like sweet music to the ear. German music. My favorite composer, you know, is Wagner."

"I think him too blunt and savage."

"Exactly. But — and here is the difference — I adore savagery while you do not. My books," he said, jumping and rushing to the shelves. Grabbing his glass, Buchner followed.

"Here," said the doctor, removing a volume from the highest shelf. He held it reverently. "This is a special copy." Buchner could see that it was bound in a black soft cloth, like felt. "Panther skin," said the doctor. "Leopa." He sighed. "My first creation. So long ago. But here —" removing another book, this one battered and torn "— is another copy."

Buchner turned to the title page. He said, "I know this author, though not this title."

"No need, no need. Here on this island, you see —" he giggled sharply "— fiction has been transformed into fact. I only regret that I am unable to reveal the truth to the writer. I imagine he would be most amused."

"Do you read other books?" said Buchner, realizing, as he scanned the shelves, that all of the books were copies of this one novel.

"No time, I'm afraid, though I will skim an occasional book or magazine of this same variety. It is a sort of fiction which does more than simply entertain. It instructs in the scientific way of life. I am gratified to understand it is immensely popular with the younger generation. The technical marvels of the future combined with the heroic figures of the past. When I read, I read nothing else."

"When we try to make that sort of movie, the people just laugh at us."

"I never watch movies. But now come." The doctor drained his glass. "I must show you the laboratory."

Buchner had not been eager to come here; and now, standing in the center of the brilliantly lighted laboratory, the lanterns casting huge shadows upon the flat gray walls, staring at the poor torn bloodied carcass that lay upon the operating table, he felt desperately ill. Turning his eyes, he said, "My God!"

"I suppose it is a powerful sight

at first," the doctor said. "But do look closer — tell me what you see."

Buchner forced himself to look again, seeing the shape of a human being, though tiny, no more than a yard in length. Neither the flesh nor skin could clearly be seen because of the immense flow of blood, but above, peering at the face, he saw the eyes: they were brown, very huge, wide open, alert and staring.

"Good God, it's alive," he said, softly.

"Naturally," the doctor said. "I could hardly kill the beast and expect him to fight. A little patching and sewing here and there, a quick whisk with a moist cloth, and he'll be ready to greet the world with new eyes. Can you guess," he asked, "the source of my raw material in this instance?"

"I have no concept."

The doctor dropped his head into an attitude of grim mourning. "A mongrel dog," he said, sadly. "They claim it is the best they can do for me."

"But what else do you want? Isn't this horrible enough?"

The doctor continued to mutter. "Dogs, alley cats, even stray rats and mice. How can I work with such things? I require animals possessed of the natural killing instinct, panthers, lions, tigers. Alas, I am nearly without funds."

"I can say only one thing," said Buchner. By avoiding looking at the creature, he recovered a degree of self-confidence. Seeing a chair turned away from the operating table, he went and sat down. "I say it is better you halt all of this horrible work at once. When we get home, I swear I must tell all I see."

The doctor, who was pacing the room, took no notice of these remarks. He waved his hands high, brushing at the top of his skull as though it were not barren. "It's not that I enjoy working under these appalling conditions. Could I afford anesthetics, I would obtain them. But money and time are nonexistent, each pressing in upon the other. I must work, work, work. Yet, at times, I cannot avoid a lingering doubt that perhaps I am setting about my task improperly, even backwards, that I have allowed the book to deprive me of my better instincts. You tell me." Pausing directly in front of Buchner, he gestured wildly. "Which is the most logical? Should I transform animals into men, remembering that these creatures have never known the blessed state of intelligent reasoning? Or should I venture along an opposite path? Turning men — who first rose from animalhood — into the creatures from whom they were spawned? Tell me. I implore you."

"Both are madness," Buchner said. "You are madness."

"Yet I must soon produce results. Even a single successful creation, according to my contacts, would bring me sufficient funds from any of a dozen governments to allow me to continue my work to ultimate fruition."

"What?" said Buchner, rising. "What do you speak of funds? You tell us your work is for the good of humanity. You tell me you are selling to the highest bidder. Which is it?"

"Both," said the doctor, with a haughty lift to his head. "Science does not recognize national boundaries. All men are equal. Shall we speak frankly?" He was gone again, pacing the room. "Africa lies only a few miles distant from this island. The Dark Continent."

"Yes."

"Well, I have made a careful study of the inhabitants since my arrival in connection with certain theories previously voiced. The dark race, as you know, lies much nearer to the animal than to the true man. So — and this again returns us to my quandary — should I not — with my tools — transform one of them — a Negro — and later the entire race — into beasts, for I can assure you the effort involved would be a lark compared to what I have already accomplished?"

"I think it is monstrous," said Buchner, who by now had been reduced by the horrors he had heard and witnessed to the most mechanical responses. "Inhuman."

"No, not that." Pacing, pacing. "Besides, I have decided it would not work. The Negro lacks sufficient intelligence to make a good fighter even with the introduction of the purely bestial factor. Even the gorilla — the one I have been able to obtain — proved impossible. But —" stopping, whirling, looming above Buchner, his shadow standing ten feet high upon the wall, waving a hand, finger thrust up "— what about the other races? Those that are inferior to the Caucasian norm and yet superior in the sense of possessing certain normally undesirable traits. The Chinaman, for example, with his inscrutability." Hurrying to the operating table, throwing open a drawer, emerging with an instrument which caught the light and glittered. "A race, shall we say, that —" approaching Buchner, one hand concealed behind his back "— is especially sly, calculating, without normal ethics or scruples. A race capable of enduring in the face of massive hate and yet one equally capable of perpetrating the greatest murder in the history of the world." Grabbing Buchner's arm, tearing the sleeve, exposing the slender bicep beneath. In a second, the doctor had plunged the hypodermic into Buchner's arm.

Buchner howled, falling back, trying to escape, but the doctor's grip was like a steel vise.

"A race such as the Jews!" cried the doctor ecstatically. "The Jews, the Jews, the Jews!"

Seated within the wide circle that surrounded the glittering fire, John Stanley found himself torn between two wholly conflicting desires. On the one hand, lost among these desolate half-human figures, their wild voices lifting into the night, the flames from the great central fire sweeping high to paint the overhanging trees a savage shade of scarlet, he wanted to shiver, tremble, scream, howl with mortal fear. On the other hand, experiencing these same sights but placing them into a different perspective, the figures like the creations of some demented Disney, their voices like the comical mutterings of burlesque comedians, he felt like jumping to his feet and laughing uproariously. He did neither. He continued to sit with his legs crossed beneath him, dimly listening to the little monkey man, who rattled on in his quick, piping falsetto voice about the nature of life among these half-men.

"The chant must always be said before the feasting," the monkey man said. "It is to praise the man with the whip."

"You mean the doctor?"

"The one who birthed us all. My father, yours."

Melody was sitting directly across from Stanley, a pig man on one side of her, a horse man on the other. There were not many females here now — Stanley could count fewer than half a dozen among the fifty or so animal men. He wondered if this had been deliberate on the doctor's part. Though women would not make the best of soldiers, surely their companionship was necessary even to an animal. Especially to an animal, Stanley thought, grinning.

But, man or woman, big or small, all were chanting now: *He gave us the light and showed us the way. He held up the knife and gave us the fire. He called us to see and opened our eyes.*

Joining in as best he could, Stanley let his eyes roam around the circle, studying the animal men. With no preconceptions, each might have been mistaken for some horribly crippled or mutilated example of humanity, but once you looked deeply enough, it was readily apparent what each of them was, for all carried the unmistakable marks of their heritage. The horses were patient and obedient, the cattle dull and slow, the monkeys shrill and quick, the pigs gross and foul, the lions and tigers proud and powerful.

And I am a hyena man, Stanley reminded himself: a nasty little coward.

He gave us the feet and told us to walk. He gave us the tongue and told us to speak. We are the children. He is our father. We beg of him now to see us as men.

"Here comes our leader," the monkey man said.

For a moment, Stanley was genuinely fearful, but the creature approaching from the grass huts behind the fire was anyone but the doctor. He was tall, with a huge barrel of a chest and gigantic arms. He walked stiffly upright as though fighting the forces of gravity, and, unlike the other animal men, he was not naked but wore a large pair of khaki trousers and, upon his huge feet, shoes. The thing entered the glare of the flames and raised his arms above his head. As soon as he saw the face clearly, Stanley knew: a gorilla man.

"He is very wise," the monkey man confided. "He often speaks to the man with the whip."

The clearing was silent; the animal men sat without moving, staring at their leader. Eventually, he spoke:

"It is a good night, my brothers, for all is right and proper with our world, and we are each deeply glad of this blessing. Above, the moon shines brightly, and we are all alive and men. Let us feast."

A group of females — as many as twenty — approached from the huts. Each carried a large earthen bowl balanced upon her head. In spite of the pig he had shared with the doctor, Stanley discovered he was hungry.

But when his plate was passed, he groaned aloud, for it was filled with leaves, grass, bark and twigs. He glanced at the monkey man and saw that his meal was the same. Then, carefully, he set his plate between his legs and glared across the fire at Melody. But she was still chattering with her pig man, apparently oblivious to the meal which awaited her.

"You are not hungry?" asked the monkey man, his cheeks stuffed with leaves and grass.

"Not right now," said Stanley.

"Most often, the new men are very hungry. They eat and eat and eat. The pain is great when the knife comes down. Food helps wipe away the memory of the pain."

"I have a weak stomach," Stanley explained.

"A hyena?" asked the monkey man.

"I'm not typical of my breed," said Stanley.

The monkey man nodded and returned to his own meal, feasting eagerly. Bored and hungry, Stanley listened to the bitter growling of his vacant stomach. The gorilla man ate alone in front of the fire.

The flames and food had attracted a flock of buzzing insects. A fly whizzed around Stanley's head, pausing now and then to land upon the lip of his untouched plate. Cautiously, Stanley edged his hand forward, keeping the shadow away from the fly.

He struck.

"Ah," he said, feeling the moist carcass of the fly against his palm.

A sudden silence.

Then someone gasped. A woman shrieked. A voice was crying softly.

A lump in the pit of his stomach, Stanley forced himself to look up. The dead fly was smeared in his palm. All eyes fastened on him. The gorilla man sprang to his feet. The monkey man leaped gracefully away.

"But —" said Stanley. "But I only —" He held up his hand, displaying the fly.

"The beast has got him!"

The animal men rushed forward in mass. Stanley had time only to throw himself flat on the ground, and then they were on him. A heavy form leaped upon his back and pinned his shoulders to the ground. Then other hands grabbed his arms and legs and lifted him up.

He tried to cry out, but a loud voice chanted at his ear: *He gave us the vision and told us to know. He gave us the light and said we must weep.*

Stanley said nothing; protest was futile. Gently, he was carried away into the night. As he left the edge of the fire, he turned to seek a final sight of Melody. She was sitting no different from before, chatting with her pig man, untouched by the disturbance which raged around her.

Stanley lost his temper: "She's one too!" he shouted.

But no one was listening.

He showed us the past and said not to forget. He showed us the truth and forced us to know. He gave us our lives and now we are men.

Though he was nearly a whole year old, the pig man had never met anyone remotely resembling this unicorn woman, and so he guessed that he must be in love, for no other word could possibly explain the sensations which now raged within him. Of course, it was always possible that he had known someone similar during his other life — when he was just a pig — but those days before the descent of the knife were gone forever, recollected only dimly as a sort of pink warming haze. She even had a name; it was Melody. None of the other animal people had ever dared to take a name, but with her it did not seem a presumption, only a necessary and natural quantity which went rightly with her glorious

beauty and divine gentleness. Yes, he thought, I must love her.

"Melody," said the pig man, whispering softly so that his squeaking voice would not pain her tender ears. "That name is as lovely as the chanting music."

"And what's your name?" she asked.

"But I have no name."

"Oh, you must. I can't call you pig, can I?"

"Everyone else does," he said.

"Well, not me. I'll tell you what. I'll call you Rudolph."

"Oh, yes."

"You like that name?"

"Oh, I do."

When the food arrived, Melody ignored her plate, and though it went against all of his heritage, the pig man struggled to do likewise. The lovely whispering odor of the leaves tickled his snout; the gentle smell of the bark and twigs tempted him to feast, but he restrained himself, knowing that if he wished to love Melody, he must be as fine and human as she. But it wasn't easy. She was so strong. And he was so hungry.

"You mean you people don't know anything about that at all?" she said. "I'm really disappointed in the doctor. He should have told you."

"The man with the whip," said the pig man.

"And he never even told you about God." She said this sadly, dipping her head and spreading the soft pale flesh that blossomed beneath her round jaw. There was a moment when the pig man nearly reached up with his stunted hands, only two fingers while she had five, and his thumb like a broken stub compared to hers, and dared to touch her. "I know he believes," she said. "Tonight, at dinner, he was so sincere. But it just isn't right he should keep you in ignorance. All God's children have a right to know the truth."

"We are the children of God, too?"

"Oh, yes. Everyone is. Everything. All the men and beasts and especially men, for we are formed after the image of God."

But then came the disturbance when the hyena man, who had been born with the unicorn woman, suddenly revealed the presence of the beast within him. It often happened this way, suddenly, but Melody pretended not to notice — ashamed, the pig man guessed, of her savage companion — so he did the same, acting as though he saw nothing. And Melody continued to speak of God.

But: "Hey, what's that?" she asked, when the hyena man was carried past.

"The beast," the pig man said, hesitantly. "It rose within him."

"But that's Stanley."

"The hyena man." He was sad that such an ugly creature should have a name.

"They won't hurt him, will they?" She half stood, following the progress of the group as it wound upward toward the huts.

"They will restrain him until the beast has been driven away."

"And that won't hurt?"

"We never hurt anything," he said.

"Oh, yes." She sat again. "You told me that."

The others had gone to help ensure that the hyena man would not escape, and so they were alone beside the fire. To him, her eyes spoke eloquently with sorrow and concern. She said, "I guess that proves what I was just saying. You people are already very close to God. You don't even eat meat."

"Should a man eat another man?" he asked, guessing this was a test, that before allowing him to enter more deeply into her confidence she must first ascertain that the beast did not lurk within him. "Then should a beast man eat another beast? Only the man with the whip may kill. He tests us in the training to be sure the beast has been driven out. But we know. He has given us the light and allowed us to see."

"That's beautiful," said Melody, with a sigh. "But this book here —" reaching inside her clothing and removing a strange looking object. At first, the pig man had been saddened that she chose to wear clothes, but only at first, for now he realized that her garments added a hint of mystery to her presence, a quality totally lacking in the other animal females with their sagging udders and huge gnarled thighs. Only once since being born under the knife had he felt the driving urge he felt this moment. That had been with the lion woman, but when he asked her, she had said no. He remembered how, doing so, she had kissed his brow. A day later, the man with the whip had slain her during the training, and he remembered the bright flow of her blood and the vacant look in her staring eyes and how he had hated the man at that moment and feared him even more, but that night the gorilla man had said that it was wrong to hate, though right to fear. Only the man with the whip could kill.

She passed him the object she said was a book. It was soft, primarily black in color, with a gold cross enscribed upon one side. He handled the book tenderly, sensing the great meaning it possessed for her.

"You can't read?" she said.

He shook his head sorrowfully.

She smiled, took the book from him, and cut it easily open with her

hands. She pointed to the tiny markings upon the paper. "Each of these squiggles is a letter and all the squiggles in a bunch makes a word. They tell you things. This word here is begat, which means to be born."

"I was begat by the man with the whip."

"Let me read to you."

She began to speak in a soft, musical chanting voice. He fell instantly under her spell, barely understanding what she was saying, knowing only that he did not want her to stop.

"Here's a better place," she said, cutting the book again. "Now I want you to promise to listen very closely. This is about Jesus."

"A true man?" he asked.

"The Son of God."

"But aren't we all the children of God? You said so."

"Yes, all of us. But Jesus was like the oldest brother. The special one."

Then she read and read, and this time the pig man did manage to understand what she said. Often, to indicate that he was listening, he asked questions. The others failed to return from the huts, and the close proximity of the food was making him restless; so when she suggested they go for a walk in the jungle to discuss what she read, he did not demur.

Dawn was already beginning to crack the dark sky. Patches of red and gold could be glimpsed through the low swaying branches. The pig man asked Melody to tell him more about Jesus.

She said, "The most important thing to remember is the reason why God sent Jesus among us. That was so he could cleanse everyone of their sins. All men are sinners. You. Even men. But when Jesus died upon the cross, he called upon God to be permitted to die with all the sins of mankind upon his breast, and God said that was a good idea; so when Jesus perished all men were set free."

"What is a sin?" he asked.

"There are many sins. Avarice is a sin. So is gluttony. Sex is a sin."

"What is that?"

"When a man and a woman lie together."

"Love is a sin?"

"No. Sex. Except when you're married, when the man and woman are as one in the eyes of the Lord."

"Are you and I married?"

She giggled. "Of course not. We cannot be married unless a minister says so."

This revelation saddened the pig man, especially since he did not know any ministers. But he remembered that she had also said that love was not a sin; so maybe they could find a minister some other day.

"But Jesus," he said. "Did he really die upon the cross?"

"In a way, I guess he did. There's a lot of discussion about that. But if he did, it was only for three days. Just long enough to take care of all the sins."

"And this Jesus was a very wise man. When you asked him questions, he would answer."

"He knew everything."

"And where is he now?"

"Oh, in heaven." She waved at the blistering sky. They had reached the edge of the jungle. "He's up there, but sometimes he comes down and enters the soul of certain very blessed people. There is a great woman in California, and Jesus lives within her. She can answer all the questions."

He did not understand everything she said, yet enough made sense that he was beginning to glimpse a positive pattern. He was very saddened when she told him that his people were miserable sinners because they failed to recognize God and Jesus.

"But we didn't know the right words," he said.

"I know that." She touched his arm, begging him to sit. "It wasn't really your fault. And now you do know better." She smiled. "Aren't you glad?"

"Oh, yes."

The settlement lay directly in front of them. The pig man had not come this way on purpose; yet here they were. The sun clawed a path through the sky, rising above the fence, slipping past the sloping roof of the great house. Melody leaned her head against the pig man. Soon she slept. Cautiously, he wrapped his tiny pudgy arms around her waist, guessing this much was all right, that loving was not a sin.

A horrible scream erupted from within the settlement. Melody bounded to her feet. "What was that?"

The pig man, who had often heard this sound, said, "The man with the whip. He begats another — like us."

"That was a man screaming."

"We are all men."

Again, the scream came, more deeply than before.

"Maybe it is an animal," said Melody. But she was trembling. "Come on — show me how to get away from here."

They went back into the jungle. For a long time, the screams followed. Melody did not speak, walking, nearly running. The pig man made use of her silence trying to comprehend Jesus.

"When we get back," he said, "will you speak to the others of Jesus?"

By now, the screams had faded behind. Above, in the treetops, leaves were whispering, birds peeping. It was a glorious day.

"I must," said Melody.

The sun stood brilliantly centered at the peak of the blue glittering sky, but the gorilla man knew he was not presently capable of appreciating the gentle serenity of the moment. With a sigh he went back into the hut and sat upon the dirt floor. All night and day, ever since the awful events of the feasting, he had awaited here, praying soundlessly for the arrival of enlightenment. But he had remained as he was now: confused, fearful, uncomprehending. The sudden descent into beasthood of the new hyena man had filled him with fear. It had occurred much too soon. Many other animal men had suffered momentary relapses, but always when they were mature, after the correct patterns had been established. Could the hyena man's actions possibly signify what he dreaded most — that the man with the whip had at last succeeded in producing the creature he desired? One more truly in the image of its creator, capable of destroying and killing without regret? But how? the gorilla man wondered. Lions and tigers, horses and cattle, cats and dogs, all had proved to be peaceable when transformed, incapable of the deed of murder. Was this hyena man a human in the skin of an animal and not the opposite? If this was so, it meant the end of his tribe, the end of all he had taught and believed.

He heard the soft patter of approaching feet and drew more deeply into himself. A shadow fell across the doorway. Lifting his eyes, he said, "Enter."

It was the lion man, whom he had designated to guard the prisoner. "He is awake and demands to speak with you."

"The beast has departed?" the gorilla man asked, without real hope.

"He screams and shouts. He is angry."

"Has he eaten?"

"He throws his food upon the floor and crushes it with his feet. He asks —" whispering "— for meat."

"And the others? You have kept them away?"

"They are with the unicorn woman. She speaks to them by the feasting place."

"And the beast is far from her?"

"She speaks of love. I listened briefly."

The gorilla man nodded. At least the bitter disease which infected the hyena man had not spread to infect the woman born with him.

"Bring him here. I shall speak with him."

When the lion man withdrew, the gorilla man again sat motionlessly. He had been the second creature made by the doctor and, as

such, received more attention than those who came later. The gorilla man knew how to read and write. He was aware of the outer world and knew the man with the whip was only one of many. Still, he had never tried to prevent the others from worshipping the doctor, for to him they owed their lives, their ability to see and feel more deeply than any creature strictly man or beast. For this, they must always be grateful.

He remembered how it had been the day when the man with the whip had given him the gun and said to kill. Then, when he refused, the man had driven him into the jungle. He remembered how he had waited there as, one by one, the others came to join him. All had shared the same revulsion at the concept of murder. Only men did that, the gorilla man had learned. In that respect, the animal men were not men; they were animals — beasts.

Through the thin walls of the hut a faint breeze penetrated. The air was clean and pure, and the dry heat of midday was not unbearable. But there was no way the gorilla man could enjoy the beauty of the moment.

He sighed and waited.

Footsteps approached the doorway. There was a brief scuffling noise.

Then the hyena man fell into the hut. He landed on his knees and slowly raised his dark eyes and fastened them upon the gorilla man.

With a hate as bright as fire, the eyes of the beast flared and burned.

During the night, Stanley slept fitfully, drifting off for a few brief moments, then immediately waking. The cage was not tiny. There was more than enough room to stand upright, and, if he wished, he could even manage to walk in a tight circle. But he was angry. They wouldn't feed him. Twice during the night, the guard attempted to force plates of leaves and sticks between the bars. Stanley wanted meat. He didn't care about their customs. His stomach was killing him.

"The beast hasn't got me," he said. "I'm the same man I always am. I'm hungry."

Often during the night, in bright raging visions, he glimpsed the outcome of the entire adventure. First, he would write it up for a national magazine, then would come the book, perhaps with a newspaper serialization, and finally the movie. He would play himself and, with the proceeds, quit Hollywood at last and return to the Eastern shores, where he properly belonged. In these visions, he was able to contemplate a personal future free of anxiety and minus the

curse of idiot studio bosses, badgering producers, illiterate directors and ham actors.

At dawn, awake, he thought he finally understood something which had been bothering him for some time. To confirm a theory, he invited the lion man who guarded him to come close and hold the light so that it shined into the cage. Then he held up all the fingers of one hand.

"How many fingers?" he asked.

The lion man considered carefully. "Four fingers," he said. "One thumb."

"No," said Stanley. He thrust his hand close to the bars. "One finger — no thumb."

"All men have thumbs," said the lion man.

"I don't."

"One finger?"

"Only one."

The lion man sighed and stared intently. "One finger," he said, sadly.

"Yes." Stanley had another idea: "I am a true man and ought to be set free."

"We are all men. The beast has got hold of you."

"That's not true. He has left."

"If he had," the lion man said, "you'd be the last to know."

"But I'm not lying."

"What is a lie?"

The lion man turned his back upon Stanley's violent curses.

By midday, Stanley was alone. Waking again, he stretched and decided the worst thing about jail was the absolute boredom of waiting for nothing.

The lion man entered the hut.

"Did you bring me any food?"

"The gorilla man will speak with you."

"I wish he'd feed me."

Outside, it was a calm, tranquil day. As he followed the lion man through the village, Stanley looked downhill and saw the other animal men clustered in the area of last night's feasting. If Melody was among them, he did not see her.

"What's all that?" he asked.

"The unicorn woman speaks to them of love."

"At least it's a subject she knows well."

"They say she speaks beautifully about a man named Jesus. Her words are like the chanting music. I do not have time to listen."

As they reached the door to the gorilla man's hut, Stanley turned and tried to make a break. The attempt was half-hearted at best, undertaken primarily because he thought it would read well when set in print. The lion man lifted him easily off the ground and tossed him into the hut.

Raising his eyes, he glared at the gorilla man. Sitting up, he shook himself. In the pure light of day, this one looked even dumber

than the rest. Straight out, Stanley told the gorilla man, "I'm starving to death. You've got to help me."

"Food has been provided for you."

"I can't eat that stuff."

"We all eat the same. All are men. Why are you different?"

Stanley cursed his own devious cleverness. Why had he ever told the hyena lie in the first place? He was beginning to realize the panther man would have helped him in any event. He decided to take the direct course this time. He said, "Because I am a true man. No different from the man with the whip."

"That is impossible." But the gorilla man leaned forward and stared at Stanley. His breath stank awfully, but Stanley was determined not to flinch.

"You are a true man," the gorilla man said. "How could I have made such an error? I thought —"

"The light was poor last night," Stanley said. "Besides, I did lie, and I know you people don't understand about that."

"The others are ignorant," the gorilla man said, with a note of pride, "but I am different. I have read many books and know about men."

"If you're so smart, why won't you do what the doctor asks? It'd save you plenty of trouble."

"The reason is simple. My people are both man and animal. An animal will not kill except for food. A man will not feed upon his own kind. Therefore, we cannot kill our own kind."

"A fly isn't your kind. That's what I killed."

"But a fly is an animal, is it not? We have creatures in our tribe who were once birds and reptiles. Someday, perhaps, we will have a fly, and then what? We refer to the instinct to kill as the beast, but actually it is the man who kills. We dare not stray or we are lost."

"But when do I get to eat?"

"You will be returned to the doctor."

"You'll have to kill me first. Because if you don't, he will."

"I do not understand."

"The doctor is not an easy man to get along with."

Apparently, the gorilla man did understand. Getting to his feet, he began to pace the length of the hut, a caricature of a worried man. He said, "I'm sorry but I cannot allow you to remain here. You may infect my people with your lies."

"What if I promise not to murmur a word?"

"How do I know you're not lying?"

"I'll cross my heart. How's that?"

The gorilla man shook his head sadly. "I'm sorry."

"Wait," said Stanley. "I'll tell you what. I'll even promise to eat your food. And her too. I promise she'll give you no trouble."

"She? Who is this?"

"The girl. Melody. The one I said was a unicorn."

"No!" The gorilla man came close, fear streaking his face. He gripped Stanley by the shirt front. "You are lying."

"About Melody?" He squirmed, trying to get loose. "Why should I?"

"But she's talking to my people now."

"She's got a loose lip," said Stanley. "She's a woman. Didn't you notice?"

The gorilla man let him go and, without another word, sprang for the door. Stanley heard his heavy footsteps tearing through the village. Picking himself up, he went to the doorway and peeked out. He saw the gorilla man streaking downhill in the direction of the feasting ground, but before he could reach the mob that had gathered there, the whole bunch let out a sudden ghastly howl and turned in mass and came running toward him. Stanley watched as the two came together — the gorilla man and the mob. He didn't like what he saw. These people were supposed to be gentle and peaceful. That wasn't the way they were acting now. He caught a few words they were shouting: "Jesus," and "Love," and "Sin."

At least, knowing Melody Carr, he was beginning to understand.

When he spied the makeshift cross being hauled from the jungle, he decided he'd seen enough and hurried back into the hut, crouching in the deep shadows near the farthest wall. Jesus was the biggest lie in the universe, and these people hadn't known a thing. When the screams commenced, he plugged his ears with his fingertips and, in the artificial silence of his own mind, composed a series of short, explicit, easily understood sentences. Suddenly, as if in a mystical vision, a copy of the *Saturday Evening Post* blazed before his eyes.

Directly beneath the masthead, burning in blood-red ink, he saw his own name.

He couldn't help crying. The top magazine market he had ever cracked was *Liberty*. With unrestrained joy, he wept like a hungry baby.

Outside, another voice was crying. It was screaming and howling and begging for death. But Stanley didn't hear a sound.

He was hot.

No, no: he was hurt. It was hot. He hurt. Hot, hurt, hot. The pain started in his toes and ran up his legs and spread across his groin

and into his chest and up both arms. But it was worse here. His head burned like there was a fire inside. He held the temples, rocking back and forth, and moaned. A deep haze grew in front of his eyes, rippling with waves of blue and violet, and a face kept poking through the haze. The face was pink and bright and shiny, and the mouth kept saying, "It's all right now, my child. We are nearly done." Then the face grew an arm that darted through the haze. In its hand, the arm was clutching a knife, the tip and edge of which glistened with red. All night he had seen the knife and felt its blade and known it caused the pain. But the mouth always said the same words, and screaming never made the pain go away. He had stopped screaming. The mouth opened and said, "Now — here — look — watch me." He couldn't see anything.

The hand threw the knife away.

Something fondled his arm. He drew away, but the pain got worse, and so he stood. Walking carefully like a child, he moved across the hard ground, placing his weight firmly upon each foot before daring another step.

"Wonderful, wonderful. You are it, my child. The highest possible achievement of mankind's science. Here — stop — I want you to see yourself. Here — look in the mirror."

Some creature was staring at him. Was this what you called yourself? He didn't like it: an ugly squat hairless thing with long arms and tiny feet and a dangling jaw. He growled. A tail toppled between the stumpy legs. He laughed at the tail and caused it to waggle.

"You know me as he who carries the whip. Here, you find amusement in that. Taste my discipline."

The sharp pain rode quickly across his back. Compared to the knife, it was nothing. He giggled.

"You come," said the voice.

He went. He didn't mind walking because it made the pain go away. The haze, too. He couldn't see anything because it was too dark. Then came the sun. Immediately, he knew the sun. It was bright and burned his eyes, but he would not look away. Dropping to his knees in the dust, he raised his hands as high as he could, letting the sun bring warmth to spread across his flesh. Distantly, he heard the world, the great jungle teeming with the whisper of life. He heard the trickle of flowing water and felt the dash of the wind riding across the ground and heard the trees softly murmuring and the noise of tiny creatures plowing the earth. His eyes filled with tears.

The pain came back. He felt it sharp and searing and quick. It kept coming, but he wouldn't stop

listening. At last, looking up, he saw that the man was hitting him with his whip. Getting to his feet, he held his hands in front of him.

"Your name?" cried the man.

"Buchner," he said. The words left his lips before he could think them. He spoke again, making his voice firmer: "My name is Buchner."

"And who is Buchner?"

"A man."

"A soldier?"

"Yes, I am a soldier."

"And what does a soldier do?"

"He lives."

"No, no." Again, the pain. "A soldier kills. Here — take this."

Something was thrust into his hands. He gripped the object tightly: it was cold, long, heavy. He did not like the touch.

"You will come with me. I know you will be good. You will learn to shoot. A soldier, good soldier. And then — but not until you are ready, my child — then the test."

They went hand-in-hand through the dust, the sun following. He wanted to stop and raise his arms to the warmth but didn't want the pain. The warmth was good, spreading across his back and shoulders. He opened his ears and listened keenly, hearing everything, even his own pain, but also the joy. It was good not being alone any more. He could barely remember the way it had been before.

"You are perfect," the man was saying. "Divine. And I knew as soon as I saw you that first night. My child, my son." He made a gurgling noise in his throat. "It is so wonderful that I cannot keep from laughing."

But Buchner did not think that was laughing. He knew laughing meant joy, and he heard none of that.

He started to laugh himself, but the pain came instantly across his shoulders. He fell silent. He walked, saw, heard, sensed, smelled tasted and felt. That was fine.

By the time August Rupert awoke, thick beams of bright sunlight came streaming into the hut through heavily barred windows. He had not slept well; so it was with a groan that he forced himself off the tiny uncomfortable cot and struggled to his feet. He headed for the rear room and stuck his head beneath the nozzle of the pump, covering his neck and face with cold water.

He felt more alert now and suddenly realized what he should have noticed at once: he was quite alone. Hastily, he scurried into the main room, discovering that the others had indeed disappeared. He tried the door — finding it securely locked — then peered out a window. Far across the way, standing beside the gate in the

fence, he caught sight of the slender figure of the panther man. He shouted, but the thing, if it heard, refused to answer.

He went back to the cot and settled down with his hands behind his head. The doctor disappointed him. Last night, he had seemed like a gracious host, a true gentleman, surely not the type to ignore a guest deliberately. Imprison him, yes — Rupert understood that — but not starve him.

And there had been all those screams. He remembered now waking often during the dim hours of early dawn and hearing the most horrible cries emanating from the laboratory. It was unwise to work such long hours. Perhaps the doctor still slept. That would explain matters, for the screams had now ceased.

He heard a gunshot. Then another. Then a burst of firing. Cautiously, he approached the window, glancing out, but saw nothing. The panther man had disappeared. He heard more shots and, shrugging, went back to the cot. No wonder he was tired and hungry and miserable: shots and screams and fruity baboons. Today, when he finally saw the doctor, he would simply have to demand to be released. If necessary, the others could be held as hostages.

The lock jingled. Standing, Rupert raised a hand, preparing to launch into a listing of his demands. But it was only the panther man, who purred: "The doctor wishes to see you now."

"About time," said Rupert. "But where, may I inquire, are my colleagues?"

"Please," the panther man cautioned, leading Rupert out of the hut. "You must not mention them." They proceeded away from the house, toward the gate. "The doctor does not know yet — they have escaped."

"And left me here?"

"The hyena man said you were born of the lamb. You would not like the open life."

"Who said what?" said Rupert.

The gate was open. Rupert considered the wisdom of a dash for freedom but guessed the panther man would prove quick on his feet. Besides, the savageness of the jungle appealed to him barely more than the confinement of the hut. The doctor was waiting here, standing with one of his creatures. The beast appeared to be some variety of large ape; it was brutally ugly.

"Hurry, hurry," the doctor cried. "We have work for you."

Rupert approached with his hands locked at his sides, determined to ignore the common cordialities. Abruptly, when he was only a few yards away, he saw that the ape was holding a rifle.

He stopped.

"No, no," said the doctor. "Do come ahead, Rupert. The gentleman is an acquaintance of yours."

Rupert failed to appreciate such levity.

"I must demand —" he began. But the doctor cut him off.

"Introduce yourself," the doctor instructed his beast. "Tell this gentleman your name."

"I am," said the beast, in a growling ugly voice, "Buchner."

"No!" cried Rupert. But a second glance told him it was true. There upon the flat surface of the beast's face rose the unmistakable craggy mountain of Buchner's nose.

"This is unforgiveable," Rupert told the doctor.

"Merely an experiment. A reversal of previous methods. And, I venture to say, a marvelous success. Such a splendid shot. He has blown my targets to shreds."

"I cannot approve of this," Rupert said.

"Who asked you?"

"You shall be exposed."

"I shall be rich."

Rupert could see the hopelessness of further argument. Plainly, the man was mad. He turned to stalk away but, as he did, heard the click as the rifle was cocked.

An awful shiver ran up his spine. He turned to face the gaping pit of the gun barrel.

"A final experiment," the doctor explained. "A soldier must, you know, kill. A glimpse of flowing blood — a taste of the red — that is quite essential."

"You wouldn't dare," said Rupert.

"Alas, yes. If you wish, you may run. A moving target presents a more legitimate challenge. That's it. No — please — quicker. Now, Buchner, it's up to you. Shoot, my son. Hurry. Shoot him!"

Rupert did not hesitate. He ran like the wind. A single glimpse of the gleaming yellow eyes of the beast had left him without hope of human mercy. He sprinted across the flat open land, swinging desperately toward the distant green swaying trees of the jungle. His heart slapped against his ribs. His lungs burned with fire. Shutting his eyes, he ran blindly. He heard the shot. And fell. Clasping his stomach. He rolled upon the ground, shrieking, bellowing, and heard a second shot.

He lay still.

Hearing nothing.

Then a bird peeped.

A voice said, "Get up — he missed."

It was Stanley. Rupert opened his eyes gingerly. "He did?"

"Yes," said Stanley. Melody was with him. She was crying. "Take a look," Stanley said.

Rupert swiveled upon the ground. Not far away, two bodies

lay touching upon the ground. One belonged to the doctor. The other was Buchner.

"Stanley," cried Rupert, "you saved me!"

"Afraid not. Nothing I could do. It was Buchner. He killed the doctor. Also, himself."

Rupert got to his feet, rubbing his bruised elbows, and followed Staney toward the place where the bodies lay. Coming from the gate, the panther man also approached.

The three men met.

"The new man," said the panther man. "He has killed. But it is wrong for a man to kill." His wide eyes stared at Stanley, then Rupert, seeking advice. "But the doctor was his creator."

"Yes," said Stanley. He gave Rupert's sleeve a harsh tug, drawing him back toward the settlement.

They walked together, leaving the panther man alone.

"But shouldn't we make certain they're dead?" Rupert asked.

"They're dead," said Stanley. "What else could they be?"

Some two hours after the arrival of the company of French soldiers, their captain came to Stanley and Rupert and asked if either wished to participate in tracking down the remaining animal men. "It ought to make an interesting hunt," the captain said.

"I'm sure," said Stanley, "but not me." He smiled apologetically. "I never kill except to eat."

"Nor me," said Rupert. "My awful ordeal, you know."

The captain — a small man with a vicious stub of a mustache — made no effort to conceal his contempt. Since his arrival, he had already had more than one opportunity to express this emotion. First upon hearing Stanley's original story, though he had rapidly switched from contempt to astonishment after viewing Buchner's body, and secondly upon receiving Melody's tearful appeal that the animal men be spared and sent to various of the world's zoos.

"Zoos are for animals," the captain had said. "They are meant neither for monsters nor freaks."

"But they are Christians," said Melody.

"As am I," the captain replied, with contempt.

Now Rupert and Stanley sat in big wicker chairs upon the wide porch fronting the doctor's house. Melody was somewhere upstairs, weeping. Rifle shots from the jungle reached the two men.

"You know," said Rupert. "The French are an idiot race. Nearly as bad as the Germans."

"And almost as bloodthirsty," said Stanley, hearing the shots.

The two men shared a bottle of brandy. But it was nearly gone.

Soon thereafter, the French captain approached and stood beside them. After suffering several minutes of silence, he drew himself up and assumed a philosophical stance. "Seeing you two gentlemen," he said, "one American and one English, I cannot help recalling the years of the Great War when our countrymen, yours and mine, fought side by side against a common enemy for a glorious cause."

"When was that?" asked Stanley, wrinkling his brow.

"Why, the war of 1914," said the captain. "But of course."

"Oh," said Stanley. "But you must forgive me. I don't seem to be able to remember. Which was that? A book or a movie?"

When he could no longer hear the dwindling putter of the motorboat, Leopa emerged from underneath the porch, crawling into the faint light of dusk. He pricked his ears high, listening to the wind, but heard nothing beyond the gentle motions of the jungle.

As the doctor's first-born, he had never been alone before. But the men were gone now. The doctor was dead. And, from the silence of the jungle, he understood that the others too were also either gone or dead.

Long ago, the doctor had told him that the dead must be buried. Remembering this, he went and got a shovel. He knew why too, though this was not something the doctor had taught him. The dead were buried so that their spirits could move easily outward into the blanket of the surrounding earth and thus escape into the outer world where it was possible for them to find and join another body. Often, walking through the jungle, he would chance upon wandering spirits and always directed them toward the laboratory where he knew the opportunity of finding new and vacant bodies was excellent.

But the laboratory — that too was gone now. And the bodies as well.

Carrying the shovel, he went to the place where the bodies of Buchner and the doctor lay.

The ground was hard and the shovel was dull. Not being a powerfully built creature, Leopa found digging a difficult task. But he would not quit. By the time he had a deep enough hole, it was pitch dark. He dragged Buchner's body toward the grave and dumped it in. The moon rose above the jungle, spilling its golden light across the open land. Carefully, Leopa filled the grave. He used the back of the shovel to pack the earth hard and tight.

Then he turned and looked at the doctor, whose body lay flat

upon the ground, the eyes open, the wound in the chest invisible in the dim light. Soon the doctor would rest in the earth. And his spirit would rise. It would flee. It would rush to seek a new life.

Leopa dropped the shovel.

He approached the body of the doctor, dropping to all fours. He padded slowly across the ground, his paws barely creasing the earth. Deep in his throat, he felt an unfamiliar sound building and demanding to be let free. Parting his lips, he growled.

He crouched above the doctor and stared down through tiny eyes. Throwing his head high at the moon, he howled. Then, bending down, cautiously at first, then more and more desperately, he slashed at the doctor's chest with his fangs, rending the cold flesh, tearing off great bloody strips of raw meat. He feasted deeply, filling his empty belly until it could hold no more. When he was done, he lay beside the naked remains of his father and bathed in the harsh moonlight. Soon he slept a calm and tranquil sleep — a dreamless sleep.

On January 31, 1933, August Rupert, John Stanley and Melody Carr reached the shores of New York City. In spite of the fact that they had been forbidden to reveal the true circumstances surrounding their disappearance, all three immediately rushed to the nearest newsstand and purchased a thick fistful of morning dailies.

"Oh, Christ," said Stanley, pointing to a dim photograph on the first page of his paper. "Look at all this. I bet we didn't make page ten."

"Twelve," said Rupert, glancing up from another paper. "But I must say I like that man's mustache." He pointed to the dim photograph. "Do you think, if I grew one, it might possibly help my career? Like Gable."

"It sure couldn't hurt any," said Melody.

Bill Pronzini is primarily a mystery novelist, but he turns occasionally — and successfully — to the fantasy field as in this story, in which he works the rich vein of the horror story.

Thirst

by BILL PRONZINI

The desert lay spread over more than two hundred square miles — a dead sea sustaining grotesque cacti with spines like razor-edged daggers, a haven for vultures and scorpions and fat brown snakes, an arid and polychromatic graveyard strewn with the very bones of Time. The afternoon sun, in a charred cobalt sky, burned with meteoric intensity; and heat shimmered in tangible waves across the arid wastes, distorting multishaped outcroppings of granite and limestone and shale, blurring surrealistically the jagged crests of the Red Hills on the eastern horizon.

There was almost no motion, there appeared to be no life. The desert creatures had sought shade and shelter for the day, and an occasional hawk or carrion bird wheeling languidly through the thick air was the only apparent evidence that life could and did exist on this desert. And then, abruptly, the two specks appeared — moving slowly, moving painfully due west from the wavering reddish-gray umbras of the Red Hills...

March said, "We're going to die out here, Flake."

"Don't talk like that."

"I don't want to die this way."

"You're not going to die."

"I don't want to die of thirst, Flake!"

"There are worse ways."

"No, no, there's no worse way."

"Quit thinking about it."

"How much water is left?"

"A couple of swallows apiece, that's all."

"Let me have my share, Flake. My throat's on fire!"

"All right," Flake said. He took

Micronite filter. Mild, smooth taste. For all the right reasons. Kent.

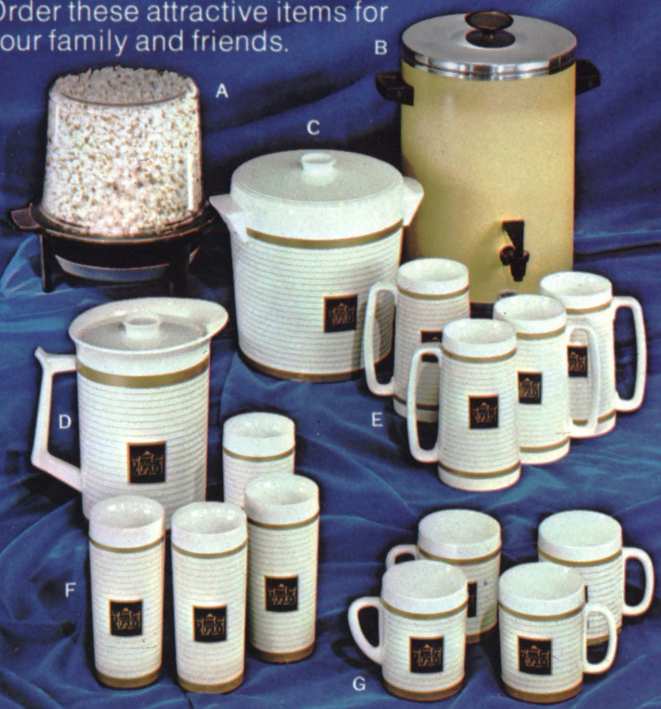
America's quality cigarette.
King Size or Deluxe 100's.

Kings: 17 mg. "tar," 1.1 mg. nicotine; 100's: 19 mg. "tar," 1.3 mg. nicotine av. per cigarette, FTC Report Aug. '72.

Warning: The Surgeon General Has Determined That Cigarette Smoking Is Dangerous to Your Health.

Collect the Kent "Collectables."

Take advantage of this special Kent offer. Order these attractive items for your family and friends.



Please send me the following Kent Collectables:

- ☐ **A.** 4 qt. corn popper $9.95
- ☐ **B.** 30 cup insulated party perk $12.95
- ☐ **C.** 4 qt. insulated ice bucket $5.00
- ☐ **D.** 55 oz. beverage server $5.00
- ☐ **E.** Set of 4-16 oz. insulated steins $5.00
- ☐ **F.** Set of 4 insulated tumblers $2.50
- ☐ **G.** Set of 4-10 oz. insulated mugs $2.50

I am enclosing 10 Kent end flaps (KENT) for each item ordered, plus check or money order. Offer continues as long as supply lasts. Allow 3 to 4 weeks delivery. I certify I am 21 years of age or over.

Name_____ Address_____

City_____ State_____ Zip_____

Mail to: Custom Service Co., P.O. Box 888, Maple Plain, Minnesota 55359

the last of the airtight canteens from his shoulder, unscrewed the cap, and drank two mouthfuls to make sure he got them. Then he extended the canteen to March.

March accepted it with nerveless fingers. He sank to his knees in the reddish desert soil, his throat working spasmodically as he drank, making sucking noises at the neck. When there was nothing left, when he had licked away the last droplet, he cradled the canteen to his chest and knelt there rocking with it.

Flake watched him dispassionately. "Come on, get up."

"What's the use? There's no more water. We're going to die of thirst, Flake."

"I told you to shut up about that."

March looked up at him with eyes like a wounded animal's. "Do you think he made it?"

"Who?"

"Brennan."

"What do you want to think about Brennan for?"

"He didn't take all the gasoline for the jeep."

"He had enough."

March whimpered, "Why, Flake? Why did he do it?"

"Why the hell do you think he did it?"

"Those deposits we found are rich, Flake. The ore samples proved that. But there's more than enough for all of us."

"Brennan's got the fever. He wants it all."

"But he was our friend, our partner!"

"Forget about him," Flake said. "There'll be plenty enough time for Brennan when we get out of here."

March began to laugh. "That's a good one. Oh, that's a rich one."

"What's the matter with you?"

"*When* we get out of here, you said. *When.* Oh, that's a good one, that's —"

Flake slapped him. March grew silent, and his dust-layered fingers were like reddish spiders on the surface of the canteen. "You're around my neck like a goddamn albatross," Flake said. "You haven't let up for three days now. I don't know why I just don't leave you and go on alone."

"No, Flake, please, Flake..."

"Get up, then."

"I can't. I can't move."

Flake reached down and caught March by the shoulders and lifted him to his feet. He stood there swaying. Flake took his arm and pulled him along, and they began shuffling forward again. The reddish soil burned beneath their booted feet. Stillness, heat, nothing moving, hidden eyes watching them, waiting. Time passed, but they were in a state of timelessness.

"Flake."

"What is it?"

"Can't we rest?"

Flake shaded his eyes to look upward. The sun was falling now, shot through with blood-colored streaks, and it had the look of a maniac's eye. Vacillating threads of gold and burnished brass and coralline interwove on the horizon, fashioning the intricate symmetry of another sunset.

"It'll be dark in a few hours," he said. "We'll rest then."

To ease the pressure of its minor and yet immense weight against his spine, Flake adjusted the canvas knapsack of dry foodstuffs. March wanted to cry, watching him, but there was no moisture left in him for tears. He stumbled after Flake.

They had covered perhaps a quarter of a mile when Flake came to a standstill. "There's something out there," he said.

"I don't see anything."

"There," Flake said, pointing.

"What is it?"

"I don't know. We're too far away."

They moved closer, eyes straining against swollen, peeling lids. "Flake!" March cried suddenly. "Oh Jesus, Flake, it's the jeep! It's our jeep!"

Flake began to run, stumbling, falling, picking himself up to run again. The jeep lay on its side near a shallow dry wash grown heavily with mesquite and smoke trees. Three of its tires had blown out, the windshield was shattered, and its metal-plated body was dented and scored in a dozen places.

Flake dragged himself up to the jeep and looked inside it and around it and down into the dry wash. There was no sign of Brennan, no sign of the four canteens Brennan had taken from their camp in the Red Hills.

Staggering, his eyes wide and bright with hope, March came up. "Brennan? Brennan?"

"He's gone."

"The canteens?"

"They're gone, too."

"What...do you think happened?"

Flake said, "Maybe one of the tires blew, and he lost control and rolled it over. That's how it looks."

"Can we fix it? Can we make it run?"

"No."

"Why not? Christ, Flake!"

"The radiator's smashed, the tires are blown, the engine's pretty well bunged up. How far do you think we'd get even if we could get it started?"

"Radiator? Flake, the radiator..."

"I already checked it. All the water's drained out."

"Oh God!" March said. He sank to his knees, hugging himself, and began the rocking motion again.

"Get up," Flake told him.

"It's no good, it's no good, we're going to die —"

"You son of a bitch, get up! Brennan's out there somewhere, with the canteens. Maybe we can find him."

"How? How can we find him? He could be anywhere."

"He came through the jeep crash," Flake said, "but maybe he was bunged up a little too. If he's hurt, it'll slow him down. We might still catch him."

"He's had three days on us, Flake. This must have happened the first day out."

Flake did not say anything. He turned away from the jeep and began to follow the dry wash to the west. March knelt on the ground, watching him, whimpering, until Flake was almost out of sight; then he got to his feet, lurching, and began to run spindle-legged after him.

It was sunset when Flake found the first canteen.

The last burning edge of the sun had vanished in the flame-streaked sky to the west. In a few minutes the flame would gentle into a wash of pink, and the pale sphere of the moon would rise slowly; the desert would turn vermilion, as if infrared light were being cast over it. Now, the harsh landscape had softened into a serene and golden tableau.

Flake had been following a trail that had begun a thousand yards from the wrecked jeep. At that point there had been broken clumps of mesquite, other signs that told him Brennan was hurt and crawling more than he was walking. The trail led through the arroyo, as it hooked sharply to the south, and continued due west toward the nearest civilization — the town of Sandoval, the starting point of their mining expedition a month before.

The canteen lay in the shadow of a clump of gold-mantled rabbit brush. It was empty. Flake picked it up, turned to look for March, and saw him a hundred yards away, shambling like a drunk. He looked at the canteen again. If Brennan had drunk all the water it contained in the short distance between the wrecked jeep and this spot, he had to be badly hurt — unless the canteen had been almost empty when he had started out.

Flake followed increasingly more obvious signs, excited now, hurrying against the encroaching darkness. Ten minutes later he located the second canteen, empty, and his urgency grew and soared. He summoned reserves of strength and plunged forward in a loose trot.

A hundred and fifty yards distant he saw the third canteen — and another fifty yards beyond there, the vulture. The black,

smoothly gliding form was about to settle near something in the shade of a natural stone bridge. Flake ran faster, waving his arms, shouting hoarsely in his burning throat. The vulture slapped at the air with its heavy wings and rose upward. It continued to circle, looking down malevolently, as Flake reached the motionless figure and dropped beside it.

Brennan was still alive, but by the expression of agony on his face, the faint irregularity of his pulse, he would be dead within the hour. His right leg was twisted at a grotesque angle, and his face was bruised and scratched. As mortally hurt as he was, he had managed to crawl almost a mile in three days.

The fourth canteen was gripped in Brennan's fingers. Flake pried it loose and upended it over his mouth. Empty; no moisture at all. Flake cast it away and shook Brennan savagely by the shoulders; but he had lapsed into a coma, and the violent motion failed to bring him out of it. Flake released him finally and worked the straps on the knapsack on Brennan's back. The ore samples were there.

Flake struggled to his feet and stood looking down at Brennan for a long time. Then he heard March coming up, but he did not turn. He kept staring down at Brennan from between the blistered slits of his eyes.

"Flake! Flake!"

"I'm here, March."

"You found Brennan!"

"Yeah, I found him."

"Is he dead?"

"Almost."

"What about water? Flake, is there —?"

"No. Not a drop."

"Oh, Flake, oh no no no!"

"Shut up and let me think."

"It's finished now, there's no hope now..."

"Goddamn you, quit your whining."

"We're going to end up like Brennan there," March said. "We're going to die, Flake, we're going to —"

Flake backhanded him, viciously. "We're going to get out, March. Do you hear me? We're going to get out!"

"No, no, no, no..."

"We're going to get out," Flake said, and this time there was absolute certainty in his voice...

They came out of the desert three days later — burnt, shriveled, caked from head to foot with red dust like human figures molded from soft stone.

Their appearance, and the subsequent story of their ordeal, caused a great deal of excitement in Sandoval — more so than the rich ore samples in the knapsack attached to Flake's back. They

received the best of care, at first in the town hospital and then in the cool darkness of a private hacienda arranged for them just outside the village. They were celebrities as well as rich men; they had survived the plains of hell; they had beaten the desert; and that miraculous achievement set them apart from ordinary mortals.

It took two full weeks before their burns and infirmities had healed sufficiently to allow mobility. In high spirits, Flake immediately went to work organizing mining operations in the Red Hills, on the claim he and March and Brennan had previously filed in the name of the Union Mining Corporation. But March had been uncommunicative since their emergence from the desert, had been curiously disinterested in their popularity and their wealth; he preferred to remain at the hacienda. The doctors at first had been afraid that he would have to be committed to an asylum; his eyes glittered in a peculiar way, and he made sounds deep in his throat from time to time that were not human sounds. But he seemed to have recovered well enough; and while Flake suspected that he had been slightly unhinged by the ordeal, he thought March would be his old self again in time. When you were a rich man, all your problems were solved in time.

Flake came home to the hacienda that night and found March sitting in the darkened kitchen. He told him the day's events, but March did not appear to be interested. When Flake finished talking, there was a period of silence; shrugging, he went to one of the cabinets and took down a bottle of tequila and poured himself a drink.

Behind him March said, "I've been thinking, Flake."

"Good for you. What about?"

"About Brennan."

Flake licked the back of his hand, salted it, licked off the salt, and drank the shot of tequila. "You'd better forget about Brennan," he said. "Don't ever think about Brennan."

"I can't think about anything else," March said. His eyes were very bright. "What do you suppose the people here would say if we told them the whole story about what happened? If we told the complete truth?"

Flake's face darkened. "Don't be a damned fool."

March smiled. "We were thirsty, weren't we, Flake? So very thirsty."

"That's right, we were thirsty. And we did what we had to survive."

"Oh, yes," March said. "We did what we had to do."

He stood up very slowly and

lifted a large folded square of linen from the table. Under it was a long, thin carving knife. March picked up the knife and held it tightly in his hand, the blade extended to Flake. Sweat shone on March's skin, and his eyes glistened now like pools of phosphorous. He took a step forward, and another.

Sudden fear welled up inside Flake. He opened his mouth to tell March to put the knife down, to ask him what the hell he thought he was doing; but the words caught in his throat. He turned and tried to run, but March tripped him and knocked him down and straddled him, the knife held high.

"Do you know what we are, Flake?" March asked. "Do you know what we — what *I* — became out on that desert the night we cut Brennan open and drained his blood into those four big airtight canteens?"

Flake knew, then, and he began to scream.

"I'm still thirsty," March said.

The knife blade seemed to gleam whitely, like a very long, very sharp incisor, as it bit downward into Flake's jugular...

SOME GARLIC FOR JONATHAN

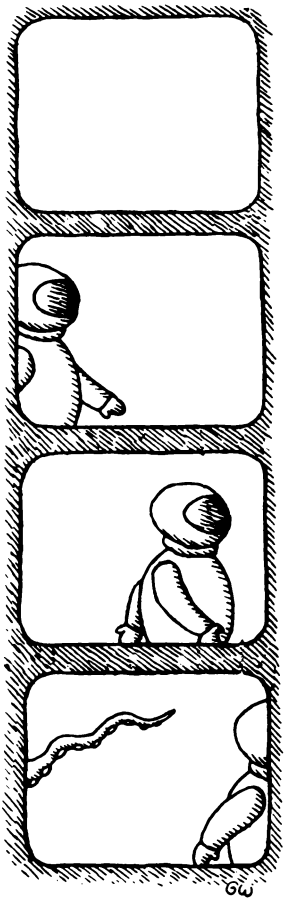
I was excited about seeing the German film *Jonathan* because I had been aware that it had garnered some reputation in cinematic circles. Well, I should have known...It has a reputation, not because it is a good vampire film — but because it is arty, pretentious, murky, symbolic, and presumably allegorical, though bedamned if I could figure out its inner meanings (despite the clue of an ad campaign calling it "the first anti-Fascist vampire movie").

Mind you, I'm not saying that all the above qualities will necessarily make a film's reputation, but all too often they do, particularly if it's a film with a "pop" subject gussied up to look artistic (for instance the pseudo-gangster movie "Mickey One"). Usually it ends up being neither good pop entertainment or a work of art, but with the worst qualities of both.

So that is what we have with "Jonathan." The basic idea is interesting: In a mythical country which seems to lie somewhere in the 19th century, vampires have become a force to reckon with. Almost in an s-f sense, two different species, vampire and human, are striving against each other. (The vampires look like the standard

BAIRD SEARLES

Films



model, but they can come out in the daytime.) It comes to the attention of the Professor (*What* professor? Who knows? Exposition is not the film's strong point.) that all the vampires will be at a castle by the sea next week some time for an annual convention (or something). A young man named Jonathan is sent to reconoiter.

After serious misadventures on the way, he reaches the castle, sneaks in and is immediately captured. However, the Count (What Count? See note above.) gives him the freedom of the house. The vampires-in-residence seem to be divided into several types: rank and file, who wear red, do a lot of group calisthenics and snack collectively off captives rounded up in the countryside; brides and bridesmaids who wear white robes and wreathes in their hair and trip about doing bad ballet like fugitives from a spring dance recital; and servants, who wear black as does the Count, just to confuse the class distinctions.

After a pitched battle with the humans (and a graphic torture scene for Jonathan), the surviving vampires are driven into the sea, which seems to have the effect of garlic soup — they all end up looking like a bouyancy demonstration in the Great Salt Lake; then vanish, leaving a lot of floating laundry.

Basically this could have been an original and viable script. But it is full of aimless incident and sheer nonsense. Nobody's reactions are logical (the most extraordinary events are ignored by everyone present); in fact, few *actions* are logical.

There are some good things. Good camera work (despite uninspired direction). And some of the incidents, though non-relevant, are interesting — a girl, attacked in the usual way by the Count (but overtly orgasmically then feeds off a bloody wound in his chest. Obscure...but interesting. But alas, the definitive modern vampire film is yet to be made.

However, I'm happy to say that despite pretentious nonsense like "Jonathan" or bloody crowd titillators like "Theatre of Blood" which occasioned a tantrum here several months ago, the horror film is alive and well. How do I know? I saw *The Legend of Hell House.*

Richard Matheson scripted it, based on his own novel. I first had hopes for it when I saw the cast, a really good one particularly on the distaff side; Pamela Franklin (Flora in "The Innocents" who grew into such a beautifully seductive bitch schoolgirl in "Jean Brodie") and Gayle Hunnicutt (whom I'd just seen give a brilliant performance in the Masterpiece

Theatre dramatization of James' "The Golden Bowl").

The script itself is reminiscent of Shirley Jackson's "The Haunting of Hill House" (the film was "The Haunting"). Four people — Ben, a physical medium, Florence, a mental medium, Chris, a physicist, and his wife Ann — spend a week in an evil house in an attempt to rid it of its...whatever. But where Jackson spent perhaps too much time on her collection of eccentrics, Matheson's emphasis is less on the characters, though they are nicely idiosyncratic, and more on the conflict. Perhaps the greatest pleasure of the script is the taking for granted of the malign influence in the house; thus there's none of the "can it be?" stuff. They all attack the force with more gallantry and courage than John Wayne attacking Indians, and one actually thrills at bravery on screen again. Two encounters between Florence and an invisible presence in her room (once revealed as a body outlined under bedclothes which when pulled back reveal nothing) sent chills down my jaded spine. I am so glad to find that it's still possible; that intelligent handling of a theme can produce a reaction — a thrill — rather than the simple distaste of the current fashion in wholesale gore.

Performances are good to excellent, Franklin's Florence being particularly fine. With subtle touches she conveys just a slight edge of eccentricity, a young and lovely Madame Acarti. She also carries off one of the most difficult scenes in recent memory — an onscreen seduction by an invisible being. This is, I think, a first in several ways.

The photography is good; the music is good. In fact, the movie is good. My only criticism is a slightly weak ending. But better a weak ending than a weak beginning and middle too.

Things to come dept...Columbia has announced "The Caves of Steel" by one Isaac Asimov as soon to be produced. The potential is marvelous, but can they do it without Charlton Heston?

Herbie Brennan ("A Paper Twist of Khorlo Crystals," May 1973) returns with a suspenseful story about a scientific expedition that makes an astonishing discovery in the mountains of South America.

Big City

by HERBIE BRENNAN

Long before the expedition got anywhere interesting, the native guides deserted. Prokieff took it very badly, wandering through the camp and muttering darkly about the "bloody coons." Dawson annoyed him greatly by correcting his English: "coons" was an expression reserved for Black Africans and could not be applied to Indians.

But it was also Dawson, on a more sober note, who predicted the bearers would be the next to go, probably taking the supplies with them. Since they were out of the jungle now and had managed to procure ponies, the bearers were less important than they had been. Not so the supplies. The further they pushed into the highlands, the further they moved away even from those primitive native villages they had dealt with recently. And as the soil became progressively more barren, as cover for game and game itself decreased, there would be less and less chance of living off the land. Supplies, at this stage, were very important. Prokieff had everything unloaded and stacked tightly in the largest tent. Then he worked out a guard rota with Noble and Minnis, taking first turn of duty himself that night. It was an odd occupation for an academic, thin body tense, eyes peeled in the moonlight, rifle at the ready.

In the morning, the bearers had indeed gone. Minnis remarked they might have taken offense because their honesty had been impugned. But it was really no laughing matter. If there was no immediate crisis, they still had to think about getting back.

Prokieff called a meeting, but no one could get enthusiastic about

problems so far in the future. Dawson did not even bother to come. He sent his apologies and remarked to Minnis privately that "Ivan was inclined to wax long-winded on formal occasions." It was tactless, since Minnis was not exactly close-mouthed, but entirely in character.

That morning, they broke camp without the help of native servants. The operation went slower than usual, but they managed it eventually. Reloading the ponies was the worst. They were all skittish, but the pack ponies were worst of all since they were still not yet accustomed to a white man's smell. Besides, not one of the party was anything more than a mediocre horseman — except possibly McBain.

They moved out in single file, following the river backwards towards its source high in the Andes. They would be abandoning the road long before the source was reached, of course. At the moment, however, the river was a good guide; it had even been marked on the Spanish maps, the only recognizable feature so far in a landscape changed by the weight of four hundred years.

Both Prokieff and Noble carried copies of the maps themselves. The originals, which might possibly be priceless, remained in the special care of the British Museum. It was a temporary arrangement, since they were nominally joint property of Prokieff and Dawson. If, however, the two managed to break their necks, the maps became the property of the expedition as a whole and could be withdrawn on the signature of any member. Considering their value, it was all very loose and rather silly. But neither Dawson nor Prokieff had any near relations. Originally, Prokieff had wanted to will the maps to some obscure museum in Leningrad, but Dawson, who rather liked the idea of how much academic bickering would follow a double death, persuaded him to adopt the present arrangements. Once he had privately expressed his belief to the Russian that the only conceivable answer would be to tear the parchment into pieces and distribute them equally amongst surviving party members. Prokieff, who had almost no sense of humor, replied, "That would be a great tragedy. We must take great care that at least one of us survives."

They were an unlikely party of adventurers, academics all, with only Dawson, McBain and, of course Professor Prokieff himself having much experience of field work. They were all specialists, experts on some aspect of the Inca and Mayan cultures; all quite well known in the circles where such experts are well known. With one

exception, they were deeply dedicated to the expedition, which, even with grants, was costing them money. The exception was young Sullivan. He had been lecturing at Magee University in Londonderry and smelt trouble in the air of Northern Ireland. He made no secret of the fact that he had joined the expedition largely to get out before the storm broke.

None of them sat gracefully on horseback, but they managed. The pack ponies, looped together, brought up the rear, led, at that moment, by Minnis. Except close in to the river, the countryside looked bare after the vegetarian rage of the jungle. It had also grown very noticeably cooler as they climbed. They were moving through a sort of no man's land. Below them, the river wound down brightly to the jungle. Above them towered the white-capped peaks of the high Andes. They followed a rocky path beside the river, traveling country that grew perceptibly less appealing with each passing mile.

Despite a healthy natural optimism, Prokieff began to wonder more than ever about the maps. They were genuine enough, of course, as maps. Some of the best minds in Europe had staked their reputations on that. But the fact that the maps were genuine did not prove what they showed really existed. The whole thing might be nothing more than ancient whimsy, the work of an imaginative officer with too little to occupy his mind. It would not be the first time such a thing had happened; and now that they were actually in the area, Prokieff could not help feeling it was an unlikely district for a settlement. He visualized the map and tried to superimpose it on his surroundings, imagining where, in the distance, the ruins of the settlement must lie. The geography was wrong. Whatever the culture, there were certain rules which determined the selection of sites — ease of defense, proximity to water, and so on. This one, if the map was correct, did not obey the rules. Of course, so far, the map had not proved all that accurate anyway.

Dawson drew up beside him, urged his pony into step and asked with rare telepathy, "Do you really think we'll find it, Ivan?"

Prokieff's name was not Ivan, but Gregori. Dawson insisted on calling him "Ivan" in a haze of inverted irony, as if by using the name himself, he was somehow satirizing all the idiots on earth who thought Russians should be called "Ivan," in the same way that Negroes should be called "Rastus" and the Irish "Paddy." Prokieff neither appreciated the irony, nor really cared very much what he was called. Although he was more than fifteen years older than Dawson

and poles apart in mentality, they got along together surprisingly well. He looked across and said gravely, "I was just thinking about that. Perhaps not."

Dawson grunted. They were continuing a conversation that had begun in Oxford when Prokieff first arrived to raise funds and interest for his South American expedition. He had tried previously to do the same thing in Moscow with a notable lack of success.

"There again," Prokieff said, as he had done before in substantially the same circumstances and with substantially the same inflection, "we may be extremely lucky and find a great deal. Such things have happened before."

They had, and that was really what brought every man Jack of them over the Atlantic. If they were, as Prokieff said, extremely lucky, there was a slice of academic notoriety at the end of it, perhaps a trifle more lasting prestige, possibly a shade of extra sympathy from the powers-that-were next time the question of a grant came up. Not much really, but enough. Besides, their interest in the Inca culture was real enough. He only hoped the settlement — if it ever existed at all — did not turn out to be a tiny tribal village with no more interest than a few pre-Columbian artifacts. Such things as *that* had happened before too.

They rode in silence for a long while. Prokieff began to wonder idly how the party would stand up to an emergency. They had all proved themselves surprisingly tough in the jungle — McBain especially. But in the real emergency...now why was he thinking about a hypothetical emergency? Prokieff followed the train of associations carefully and discovered he was still wondering why the guides and bearers had deserted. There was a curiously classical feel about the situation. Yet these runaways had not been primitives. They wore American windbreakers and long trousers. Some of the clothing was pretty ragged, to be sure, but they were still a far cry from the naked tribesmen who raced away from Victorian explorers shrieking, "This be taboo territory, Masa!" He voiced his thoughts. "I wonder why the guides ran off...."

"Laziness?" Dawson suggested.

Prokieff glanced over at him. "Do you really think so?"

"Most of these beggars are lazy," Dawson said. "Not just round here — the whole of South America. That's why the continent's so underdeveloped." He shrugged. "They hate to do an honest day's work."

Noble was drawing up behind. Prokieff half turned towards him when Dawson added unexpectedly,

"And if it wasn't laziness, I'm damned if I know what it could be. I don't suppose I'll ever know."

But they found out, by and large, before the end of that week.

It was harder going now, and the mountains loomed ominously. Prokieff, who was more accustomed to mountains the size of the Alps, found the Andes disturbing and at night sometimes had nightmares that they were crashing down to crush him. Part of his oppression came, he knew, from the thinness of the air. Already they had climbed to a height of more than fourteen thousand feet, and the scarcity of oxygen told during the day in lethargy and aching muscles and at night, more often than not, in a sensation of suffocation.

The environment was oppressive too. There was still quite a lot of vegetation, mostly in the form of shrub and wiry grass. But the predominant feature was rock and rocks, rearing greynesses, possibly deposited by glaciers to stud the mountainside as far as the eye could see. They stayed very close to the river now, for it had cut a path which it was still possible for the ponies to negotiate. But Prokieff knew they would have to bear away northeastward soon in search of the Inca settlement they had come to excavate. According to the map (the second map, that was: the first had shown the jungle territory far below), there was a path of sorts from the river outwards. But the map was four hundred years out of date and had not proved noticeably accurate up to now. Prokieff was not looking forward to the journey when they left the river.

A mild depression seemed to have settled over the other members of the party. It was difficult to quote examples of the prevailing mood, except perhaps in outbursts of unaccustomed irritation and a gradual crumbling of the natural discipline that had been built up on lower ground. The whole expedition moved more slowly now and often straggled. The half-formed tradition that Prokieff should be literal leader as well as head of the expedition, was gradually abandoned — rather to his unexpressed relief. Now anyone who found himself with the inclination and a surplus of energy moved his horse forward to the head of the column.

McBain was in this position now as the going, without warning, became easier. The track, which ran beside a sheer rock face cut, presumably, by the river when, millennia ago perhaps, it had run along a slightly different course, this track suddenly widened and the rock face crumbled into a smallish plain. It was a plain strewn

with boulders, studded with rock masses, cut by hills. But at least it relieved the cloying claustrophobia which had marked the going for so long.

Prokieff felt an almost tangible easing of the weight of his depression and noticed McBain, apparently caught up in the same sensation, swing his pony over, away from the familiar river. As he did so, an arrow took him in the throat.

For a moment Prokieff was stunned. He stared in disbelief at the arrow, noting foolish, irrelevant details like the long, drooping feathers which made up the flight. Then, as McBain slipped slowly down one side of his startled horse, Prokieff reined in his pony and shouted his amazement in a wordless howl. His mind, from its moment of statis, began to work suddenly at high speed. He had no rifle. With so little game about, he had ceased to carry it; the weapon was now packed along with the supplies. The thought of being attacked had no more occurred to him than the thought of being struck down by a meteor.

Some of the others, faster on the uptake and with weapons closer at hand, were already firing. The sudden noise made his horse begin to wheel, temporarily out of control. Even as he fought the animal, he wondered what they were shooting at; he could catch no sight of their attackers.

"Get down! Get off the horses and take cover!" Dawson's voice.

Fighting to control his mount, Prokieff saw Noble take an arrow in the shoulder; then three more appeared with comic abruptness in his chest. Incredibly, he remained upright on his horse. There seemed, however, very little doubt that he was dead; his pony trotted off back down the path and before it disappeared from sight, the body pitched off onto the stony ground.

Dawson and Minnis had both dismounted, using their ponies as cover like two plainsmen in the Old West. They were firing steadily and with apparent care, although Prokieff could still see nothing of their targets. There was no sign of Sullivan at all.

He realized the attackers must be hidden in the rocks some distance over to his right and presumed this was what Dawson and Minnis were firing at in an attempt to keep them down. But the arrows still hissed, their feathers curiously colorful in the clear air.

One of the arrows grazed the flank of his pony, and any chance he might have had of bringing the nervous animal under control now vanished completely. As the beast galloped off towards the rocks that sheltered their attackers, Prokieff

flung himself down flat, clinging to its neck and praying. Behind his prayer hovered a totally irrational thought, repeating itself over and over again: This can not be happening. This can not be happening.

He pulled the pony to a standstill, panting and lathered. It had slowed more quickly in the thin atmosphere than might have been the case on the savannah far below. He was in a natural hollow, surrounded by rocks and consequently well concealed. So far as he knew, no one had followed him, but he felt relief just the same. Without a rifle he was helpless, and though his luck had been incredibly good so far, he did not relish trusting it indefinitely.

Prokieff climbed stiffly off the pony, wincing as he put his weight onto his left leg. He limped to a rock and sat down, then took out a pocket knife and began gingerly to to cut away part of the blood-soaked trouser where the snapped-off arrow protruded from his thigh. He glanced wryly towards the pony, now perfectly calm and attempting to find a mouthful of palatable grass among the shrub. The brute had carried him directly towards the attackers, then, apparently, through the middle of them. Prokieff still saw nothing of them, but an arrow had found a mark. It was a miracle there had been only one — and in the leg at that.

He took a firm grip on the broken shaft, gritted his teeth and pulled sharply. The arrowhead came away cleanly in a burst of pain and a brief spurt of blood. He examined the wound as best he could. No artery appeared to have been severed, which was his prime concern. He cleaned the area and dressed it rudely using a handkerchief. Prayer, he thought, would have to take the place of disinfectant. But at least the risk of infection was less here than in the damp heat of the jungle.

His most pressing need attended to, Prokieff tried to take stock of his position. It seemed obvious, first of all, that his party had been attacked by some primitive tribe not previously suspected to inhabit the region. There was a possibility that some of the others had survived the attack, but even allowing for the rifles, he thought it unlikely. They were fighting with the river behind them and the enemy, well-hidden, in front; and they had no panic-stricken horses to carry them safely through enemy lines.

So he was on his own. At least he had to assume he was on his own for the purpose of any plans he might make. He was only vaguely aware of his location vis-a-vis the river, but he had a feeling he might

have been moving in roughly the same direction he would have taken while following the map to the Inca settlement. In any case, he had really no alternative than to go on. The enemy were squarely between him and the river.

The sun was setting, throwing long, hard shadows over the rocky ground. Prokieff limped back towards his pony. The pain in his thigh had settled down to a dull, throbbing ache. He was not, he thought vaguely, cut out for this type of life; the only plan he had at that moment was to find somewhere he could safely go to sleep.

Just before darkness fell, he decided on a crevice between rocks so tiny that it could not be dignified by the title cave. It was very well hidden, so that he assumed that even if his attackers did decide to follow there was every chance they might miss him. In point of fact, he cared less than he had thought he would. With the renewed effort of riding followed by some scrambling over rocks, his leg felt as if had caught fire.

The pony was more difficult to conceal. Eventually he simply tethered it to a bush and decided to take his chances. He half crawled up to his tiny hiding place, curled up on a blanket and, despite the cramped conditions and the burning pain, fell asleep almost instantly.

He awoke fully, startled, heart thumping madly, with the butt end of a rifle poking at his ribs. For the briefest instant he knew beyond all doubt that the Indian tribesmen had discovered him. Then Dawson's voice said cheerfully, "You'd made a rotten boy scout, Ivan. This is a dreadful site for a camp."

They rode side by side, quite slowly, rifles slung over their shoulders, eyes watchful. Prokieff's leg had improved enormously. The wound was still open (healing, he expected, would be painfully slow due to the lack of oxygen), but the pain, after a night's sleep, had died to little more than the occasional twinge.

"I think," Dawson said, "I'd like to get those guides even more than the bastards who ambushed us. All it needed was a hint, and the whole thing could have been avoided." He had a vicious scar running along his forehead and down the cheek, the result of a knife wound received when he grappled, hand to hand, with one of the guerrillas. He maintained it looked worse than it felt.

"I thought they were Indians," Prokieff said. "The whole time I thought we were up against primitive Indians."

He was repeating what he had said before, but Dawson nodded seriously and murmured, "No —

guerrillas. Bloody Marxists, like you."

"It was the arrows," Prokieff explained. "I associate arrows with primitives."

"Apparently ammunition's scarce. They don't use their firearms unless they have to." He spat. "To think they've been trailing us for a week! A whole week, Ivan, and we never once suspected!" He sighed. "I can't understand why our men didn't tell us. A word was all it needed."

"Perhaps they did not know," Prokieff suggested.

Dawson snorted. "Course they knew. You needn't tell me they took off by coincidence. They knew we were going to be hit." His horse slowed and he jabbed it angrily with his heels. "But all they wanted was the rifles and a few supplies. We could have struck a bargain in five minutes if we'd known." His eyes glazed suddenly. "I'll miss McBain."

So, thought Prokieff, would he. And Sullivan, and Noble and...he glanced at Dawson. "You were lucky to come out of it alive. Luckier than I, my horse carried me away from the action."

"Well, I've you to thank for that," said Dawson heartily. He topped a rise and reined in his pony briefly to survey the route ahead.

"I think that is another of your obscure jokes."

"No, I'm serious," Dawson said. "I'm tired trying to joke with you. Once the poor bleeders heard you were a Russian, it put the fear of God in them."

He looked serious, but Prokieff favored him with a cynical lift of an eyebrow.

"Oh, use your head, Ivan!" Dawson snapped impatiently. "These boys are supported quietly by Uncle Fidel. And he's supported by your lot. They'd lose a lot of their best friends if they went about slaughtering important Russian citizens."

"But I am not an important Russian citizen," Prokieff protested. "I do not even belong to the Communist Party."

"They don't know that," Dawson pointed out. He urged his horse slowly forward. "By the time I'd finished telling them, they must have thought you were next in line to Brezhnev."

Prokieff grunted. His pony, of its own accord, moved off after Dawson's. They had one pack pony and two rifles between them. Even the man next in line to Brezhnev did not, apparently, warrant anything more from the guerrillas. Except, as Dawson had been careful to point out, free passage. It was something. The tragedy was the price had been so needlessly high.

They agreed to spend a further

week looking for the settlement. If they had found nothing in that time, they would retrace their steps to the river.

On the fourth day, more by luck than judgment, they reached the edge of a monstrous plateau. On it, crumbling majestically into the distance, were the ruins of a city.

"It is not Inca," Prokieff said. The architecture was far beyond anything the Incas had ever attempted. It was not merely style; it was size. Even in ruins, it was easy to see every building had been constructed on a truely heroic scale. Awe-struck, Prokieff climbed painfully onto the jumble that had once been a wall surrounding this great city. Portions of it still stood, defying time. The basic bricks — huge blocks of dressed granite, each one weighing tons — reminded him irresistibly of the Egyptian pyraminds. There was the same sort of precision, the same massive timelessness. "I should not be surprised if this city predates the Incas. Perhaps by a very considerable margin."

"It's very big," Dawson breathed a little foolishly.

They found a gap in the rubble and moved, with their ponies, into the city itself. They were dwarfed by the ruins.

"Stonehenge," Dawson murmured.

"I beg your pardon?"

"It reminds me of Stonehenge; I get the same feeling here I did the first time I saw Stonehenge."

"Stonehenge is not so big," Prokieff remarked.

"No," Dawson agreed. They both avoided saying outright what was really on their minds. The city was not simply monumental, in the sense that a civic building might be monumental. All its proportions were gigantic. Every single building they rode past bore witness to the huge scale used in its construction. Several arches and doorways still stood. Prokieff found himself using them as a basis to judge the height of the men who had once lived here. An impossible figure of ten feet came into his mind. He amended it downwards, but try as he might, he could not convince himself that beings under eight feet tall could comfortably have used this city.

They found a straight arterial road comparatively free of rubble and rode along it slowly. There was evidence that it had once been paved, but a wiry scutch grass had crumbled most of the stones. There was surprisingly little vegetation on the actual ruins. Perhaps the lack of oxygen protected them, or perhaps the underlying soil was naturally infertile.

It was curious, but something in the place forced them to converse in whispers, as one does in a cathedral

or a tomb. After a while, they stopped talking altogether, following the road and examining each new feature of their giant city as it presented itself. Prokieff was not normally an emotional man, but he felt close to tears. What a treasure house this whole area must be! What a joy for an archaeologist! But with supplies limited and most of his team dead, they would be able only to skim the surface. It would take another fully equipped expedition before this place gave up its secrets. And what secrets it must hold....

Could it, Prokieff mused quietly, really have housed a giant race? A few African tribes, he knew, reached an average height of seven feet. It was not, perhaps, too great a step to imagine a primitive South American race which grew twelve inches taller. Mentally, he squashed down the word "primitive." Even for men of huge physical strength, the city represented almost an engineering miracle. In his mind's eye, he could still see the precision of the stonework in those surviving portions of the walls. How on earth was it achieved? Each block must weigh tons. Once a thing like that was laid down, it was down forever. There could be no gentle tapping into place.

And how were the blocks moved anyway? The Egyptians had apparently used limitless manpower and wooden rollers. He had no idea what manpower had been available to the builders of this city, but the lack of vegetation virtually precluded the use of wood. Unless, of course, it had been dragged up from the lowlands.

But why build a city at this height in the first place? They must be at least fifteen thousand feet above sea level. So many questions!

"There were giants on the earth in those days," Dawson said suddenly.

Startled, Prokieff said, "I beg your pardon?"

"I was quoting from Genesis," Dawson told him. He caught the blank look and added, "The Bible, Ivan — you know, the opiate of the people." His face became serious. "It's a line out of the Old Testament? 'There were giants on the earth in those days.' I was wondering if the Hebrews might not have had some tradition of a race that grew taller than we do today." He glanced at Prokieff uncomfortably. "You know this business about gnomes and elves being a distorted memory of a prehistoric pygmy race." He coughed, then grinned. "That sort of thing in reverse."

Prokieff nodded. "The people of this city must have been tall," he said noncommittally.

They rode on until, eventually,

the road stopped. It ended, without warning, in a sheer drop of perhaps thirty or more feet. Curiously, the ruined buildings also stopped at this point, and there was no sign of any city wall. It was as if someone had taken a knife and sliced a piece off the whole conglomeration.

Dawson, who had fallen a little behind, joined him at the edge of the terminated roadway. He looked around him. "That's off."

"Yes," Prokieff agreed.

They made camp for the night in the odd, unfinished district, and the following morning Dawson went off to explore alone while Prokieff set himself to discover why roads and buildings finished so abruptly.

Sometime before noon, Dawson found the key to the city. It radiated from a central plaza, rather as so many Paris streets radiate from *L'Etoile.* The reason the road they followed had not taken them into the plaza was that they had, on two occasions, detoured around rubble and in doing so, had moved unconsciously onto a parallel road.

By dint of a little perseverance, Dawson reached the plaza in time to eat his lunch there. It was a surprisingly small square with, at its center, an iron pillar in a quite remarkable state of preservation. He finished eating and spent some hours exploring several ruins in the immediate vicinity. Results were disappointing. Stone remained, but the more ephemeral personal bric-a-brac which would tell so much more about the people who once lived here had now gone — disintegrated, or perhaps buried in the rubble awaiting the patient sifting operations of later expeditions.

Sometime in the middle of the afternoon, he heard Prokieff calling and hollered back as a guide to his whereabouts. He reached the central plaza as Prokieff rode in from another road.

"I think I may have solved one mystery —" Prokieff began. His eyes lit on the pillar and he stopped. He slipped from his pony and walked across to examine it more closely. Then he looked at Dawson with a startled expression on his face. "This is made from iron!"

Dawson grinned. "You'd hardly expect it to be made from plastic, would you?"

"No," Prokieff agreed gravely. He looked at the pillar. "But I would have expected it to rust."

Their supplies were running low, a factor which set their departure for the next day or, at latest, the day after. After discussion, they decided to make it the next day; they were no longer equipped to give the city the

examination it deserved, and there was no point in cutting fine their chances of a safe return simply for the sake of a few more hours of aimless wandering.

With a sense of the occasion, Dawson produced a bottle of wine he had been saving, and they drank it with their bully beef that evening as a celebration dinner. The alcohol eased some of their inhibitions so that — possibly for the first time since they entered the ruined city — they began to express themselves without the ingrained reserve of the professional academic.

"We got sidetracked by the pillar," Dawson said. It was easy to get sidetracked. To have avoided rust for — how long? who could guess? — the iron must have been totally devoid of sulfur and phosphorous. Yet that was impossible. At least, no one could produce iron like it now. He pulled his attention back and went on. "You mentioned that you had solved one of the mysteries..."

"It is a port," Prokieff said simply.

Dawson looked at him for a moment. "I'm sorry, I must have misheard you."

"It is a port. This city is a port. A seaport. It is the only explanation that makes sense."

Dawson was now staring at him in open disbelief, but Prokieff went on unperturbed. "The road and buildings stop at the quayside. There is no wall because there is no need for any wall; the city on that side is protected by the sea."

"Ivan," Dawson said, "we're at least *fifteen thousand feet* above sea level."

Prokieff nodded. "Nonetheless, the evidence points to the city having been a port. I can only assume it once lay at sea level and was raised to this height with the mountains themselves."

With the mountains themselves? Geology was not Dawson's forte, but he realized as an educated man that the Andes had come into being not simply thousands, but millions of years.... "Are you saying, Ivan, that there were men on earth *before* the Andes rose?"

Prokieff smiled a little uncomfortably.

"You're mad!" said Dawson bluntly.

Prokieff sighed. "If not men, what then? The evidence is there for anyone to see. This city was once a port. As you say, we are many feet above sea level; therefore the port must have been raised to this height by a geological upheaval. The only upheaval of sufficient magnitude to do so would have been the actual creation of the Andes." A curious light came into his eyes. "Do you realize what this city must have been like to survive

such a cataclysm, even in its ruined state? Something built it and built it strong. If not man, then what? Do you believe in invaders from space, perhaps?" He dismissed the idea with a gesture. "Look at the buildings. They are designed for men. Big men, possibly, but still men, still humans; this is stamped beyond doubt on the architecture, on the layout of the city." He subsided a little, his eyes taking on an inward cast. "It was built by a culture that could handle cut stone of a size our culture cannot handle, who could treat iron in a way unknown to us." He hesitated, then said, "Some of the stones near the quayside are fused together. The temperatures needed to achieve this must have been quite phenomenal."

"Volcanic action?" Dawson frowned.

But Prokieff, who had been drinking far too much of the wine, shook his head and murmured, "Lasers."

He woke with a headache and a feeling of depression, both presumably brought on by the wine the night before.

Prokieff was washing in the shallow metal dish. It meant he had already breakfasted. He was a creature of habit. Throughout the entire expedition he had breakfasted first and washed afterwards. Dawson watched him sleepily for a moment, trying to decide whether he could face breakfast himself. He concluded that he could not, but went to have some anyway on the premise that his body needed some foundation for the start of the long trip back.

Prokieff joined him in a little while and accepted the offer of coffee. It was strong coffee, but cool; at this height water boiled at a lower temperature. They were both very pensive and thus much more silent than usual.

They began to prepare for the journey, packing up the remaining supplies, saddling the ponies.

"Do you really believe that business last night?" Dawson asked abruptly. Prokieff looked at him. "About this place being built by people who could handle lasers," he added.

Prokieff turned back to the horse. "Don't you?"

"Yes," Dawson said. He'd examined the stones. They had not been fused by volcanic action. It was incredible, but then the whole city was incredible. The ruins rose around them, grey monuments to impossibility. God alone knew what was going to turn up when a full archaeological team went over the site. An errant thought struck him: they would have to make some sort of deal with the guerrillas for safe passage.

Prokieff was tightening a girth strap. There seemed to be a lot of tension in his face this morning, that and tiredness. To cheer him, Dawson said brightly, "Think of the paper this is going to make, Ivan. You'll set the scientific establishment on its ears." And so will I, he thought suddenly. Perhaps they should be planning a joint paper.

Prokieff finished tightening the strap and turned away from the pony. After a long while he said, "I do not plan to write any paper. It would be wise, I think, for you to follow that example."

For a moment, Dawson was thunderstruck. His mouth worked foolishly; then he said, "Are you out of your mind, Ivan? This is the most important archaeological find of the decade — of the century, dammit! Of course we'll write papers. I was thinking of a joint effort initially."

Prokieff walked slowly from his pony and sat down on a slab of stone. "Have you heard of Blavatsky?"

Dawson shook his head. "He sounds Russian." It was a stupid thing to say, but he was still shocked.

"She," Prokieff said. "It's a woman — was a woman. Russian, as you say." He scratched the side of his nose. "She caused quite a stir in Victorian times. She claimed to have found very ancient records in Tibet which showed certain continents once existed which had since sunk under the seas."

"Is this another Atlantis buff?" Dawson asked. Now that he was no longer thinking of Russian academics, the name Blavatsky did ring some sort of bell.

"Atlantis and other places," Prokieff said impatiently. He stared down at his boots. "Like so many others, she had the idea that some of these lost continents had supported high cultures — higher than our own perhaps. No one took her seriously, of course. She was a fearful crank, went in for spiritualism and claimed to be a magician and all sorts of eccentricities." He looked up at Dawson. "I am surprised you have not heard of her. All her activities were in the West — America and Britain, although she finally settled in India. No scientist took her seriously, but she built up a great following. She still has followers all over the world."

"I've enough trouble trying to keep up with my own specialty without reading up on cranks," Dawson grinned. The grin died. He was, in fact, feeling a little impatient with Prokieff. "What's all this leading to anyway, Ivan?"

"I thought you would have seen," Prokieff said. "If we were to write a paper on this city, we would

immediately be branded cranks like Madame Blavatsky. We are saying exactly the same thing as she did. We have found evidence of a lost civilization. It reached a level of culture superior to our own. We do not say it sank beneath the Atlantic; we say it rose up with the Andes — equally unlikely." He gave one of his rare smiles. "If we publish our paper, we join the lunatic fringe."

"But we have the evidence, Ivan!" Dawson protested. He swung his arm in a grand gesture. "Look at it, man! Solid stonework proving everything we say! This isn't spiritualist speculation."

"Blavatsky claimed she had the evidence of Tibetan records," Prokieff said mildly. "Even if there were no lost continents, those records would have been interesting in themselves. No scientist of repute was prepared to examine them. No one even asked to see them." He sighed. "It is even conceivable that Blavatsky had proof of her theories. Even eccentrics can stumble on important discoveries sometimes. But that is not the point. The point is that her claims seemed so fantastic that no one was even prepared to investigate them."

"Times change, Ivan," Dawson said. But even as he spoke he knew he did not believe it.

Prokieff shook his head. "You may follow your own inclination, of course, but I for one will not publish my theories." He did not meet Dawson's eye. "Nor will I lend weight to anything you may decide to publish. I am sorry."

They finished their preparations in silence. They climbed onto the ponies and, both with the same thought, swung them round to take a final look at the crumbling ruins of the massive city.

"If you're prepared to leave this unexplored, Ivan," Dawson said very quietly, "your scientific reputation isn't worth preserving."

Prokieff showed no signs of annoyance. "I do not intend to leave it unexplored. If, perhaps, I can persuade you of the wisdom of such a course, we will not say what we have found, but we will try to raise a second expedition on the same basis as the first."

Dawson stared at him thoughtfully. "We still have the maps."

"Exactly. If one expedition was possible with no more than the maps to provide the stimulus, then a second should be equally possible." He stared out across the plateau and added quietly, "If we cannot raise a full expedition, perhaps we at least may return here...."

"Damn right, Ivan!" Dawson said. "We'll be back."

They swung the ponies and headed slowly down the rock-strewn mountain.

The Decline and Fall of Adam

Article

by L. SPRAGUE de CAMP

The young Assistant Attorney General for Arkansas, Don Langston, sounded embarrassed. The case, he told the U.S. Supreme Court, had begun under a previous administration, and it was his task to see it through. Chief Justice Earl Warren asked:

"What was the significance of that?"

"I was just giving you background, Your Honor," replied Langston.

"I thought you were telling us your administration doesn't like the statute."

"I am not prepared to say that, Your Honor."

"It might not be too late, you know," smiled Chief Justice Warren.

Langston went on to argue the State's side of *Epperson et al. v. Arkansas*. The case had begun in 1965, when Susan Epperson, a pretty young red-haired biology teacher in the Central High School of Little Rock, filed suit in the Pulaski County Chancery Court. She sought to have the Rotenberry Act, Arkansas's "monkey law," declared unconstitutional. Patterned after the more famous Butler Act of Tennessee, the Rotenberry Act forbade teaching, in public schools or colleges, "the theory or doctrine that mankind ascended or descended from a lower order of animals and it shall be unlawful for any teacher, textbook commission, or other authority...to select textbooks...or use in any such institution a textbook that teaches the doctrine in question." Mrs. Epperson was backed by the Arkansas Educational Association and represented by attorney Eugene R. Warren.

The suit came up for argument on — of all days — April 1, 1966. Attorney General Bruce Bennett spoke for the State. Under Chancellor Murray O. Reed the case was disposed of in less than two hours. Warren argued that the law was unconstitutional because it was vague and partial and abridged freedom of speech.

For the State, Bennett contended that the people had a right

to control the curriculum. He questioned Mrs. Epperson for an hour. Once he asked her about the theories of "Professor Nitchky." The witness was understandably puzzled until it turned out that Bennett meant the philosopher Nietzsche. Bennett tried to draw Mrs. Epperson into a discussion of science versus religion. Warren objected each time, and Judge Reed sustained Warren.

On May 27 Judge Reed found for Mrs. Epperson. Evolutionism, he declared, "does not constitute such a hazard to the safety, health and morals of the community that the constitutional freedoms may justifiably be suppressed by the state...The field of science necessarily involves the discussion and evaluation of *speculative theories.*" So the Rotenberry Act was "unconstitutional and void."

Bennett appealed to the Arkansas Supreme Court. In May, 1967, this court upheld the Rotenberry Act in a two-sentence decision, declaring the act to be a lawful regulation of the curriculum by the legislature. Warren appealed to the U.S. Supreme Court.

While the Epperson case was on its way through the courts, a couple of similar suits were begun against the Butler Act in Tennessee. The need for these suits was, however, removed by the unexpected repeal, on May 18, 1967, of Tennessee's monkey law.

On October 16, 1968, the Supreme Court of the United States was hearing the final arguments. Eugene Warren asserted that the law was unconstitutionally vague because it did not define the scope of the verb "teach." This might mean "to teach as true, to indoctrinate or proselytize." Or it might mean merely "to describe or mention in class," without saying whether the teacher agreed.

Moreover, continued Eugene Warren, Arkansas used a standard biology text, Otto and Towle's *Modern Biology,* which has evolutionary chapters on the development of life and the origin of man. This placed teachers in an anomalous position. Some told their pupils: "It is illegal for you to read the next chapter," knowing that this was the surest way to get them to do so. If the law were broadly construed, it would be illegal to refer pupils to a standard unabridged dictionary or an encyclopedia, all of which have articles on evolution.

Now it was Langston's turn, and the austere justices saw fit to have a little fun with him. Chief Justice Warren asked?

"On that theory, would you think that the state could provide that within its mathematical courses that it would be illegal to mention or teach geometry?"

Langston: "Of course, there is going to have to be a line drawn somewhere."

Warren: "That is our problem, too."

Langston: "I might say that I am glad that your problem is not mine."

Warren: "Apparently the Supreme Court of Arkansas felt the same way."

Justice Marshall asked: "Since your Supreme Court disposed of the lower court's opinion in two sentences, would you object to us disposing of that one in one sentence?"

Justice Stewart added: "What if Arkansas would forbid the theory that the world is round?"

Langston: "I would, first of all, hope that the Courts and the people would think that that would be an unreasonable encroachment."

With an evil grin, Justice Douglas slyly put in: "How about sex? Does Arkansas have any prohibitions on teaching in the field of sex?"

Smiles and discreet laughter spread around the courtroom, where Mrs. Epperson sat with her husband, a mathematician and a captain in the U.S. Air Force, now assigned to duty near Washington. The hearing was over in half an hour.[1]

The Epperson case was a closing battle in a war of ideas which had raged in the United States for a century. In the 1870s American Protestant leaders became aware of two disturbing developments. For one, European scholars were scrutinizing the Bible more closely than ever before. They discovered that it was not a book dictated by God but a disorderly anthology of ancient Hebrew myths, legends, history, law, philosophy, sermons, poems, fiction, and not a few outright forgeries. The other development was the spread of Charles Robert Darwin's theory of evolution by natural selection, which included the idea that man had descended from apelike and monkeylike primates.

At the end of his book *The Descent of Man* (1871), Darwin stated: "The main conclusion arrived at in this work, namely, that man is descended from some lowly organized form, will, I regret to think, be highly distasteful to many." This was perhaps the understatement of the nineteenth century.

In the last third of the nineteenth century, however, enormous numbers of fossils were found by geologists in the deserts and prairies of the American West. These finds supported Darwin's theory in every detail. During the twentieth century the discovery of

the fossil remains of apish submen and other humanoid primates showed that man's pedigree had followed the same rules as those of all other organisms. By the early twentieth century the evidence for Darwinism was as overwhelming as that for, say, the roundness of the earth.

Human beings, however, do not necessarily adopt beliefs because the evidence in their favor is overwhelming. Hence we still have people who believe that the world is flat, despite Aristotle and the astronauts.

During the last quarter of the nineteenth century the spread of Darwinism aroused conservative religious leaders to denounce the doctrine and to seek, sometimes successfully, to deprive evolutionist preachers of their pulpits and professors of their chairs. In 1895 the Niagara Bible Conference issued a statement reducing Christian doctrine to five essential points:

1. The inerrancy or infallibility of the Bible.
2. The divinity of Jesus Christ.
3. The virgin birth of Jesus Christ.
4. The substitutionary atonement of Christ — the doctrine that Jesus' self-sacrifice freed mankind from the sin that they had inherited from Adam.
5. The physical resurrection of Christ and his eventual Second Coming.

The Five Points were set forth with variations on many later occasions. Since the first point demanded literal belief in the Creation myth of Genesis — Adam, Eve, Serpent, and all — it brought the Bible into head-on collision with Darwinism.

In 1907 the millionaire brothers, Lyman and Milton Stewart, founded the Los Angeles Bible Institute and chose a committee to codify the tenets of the faithful. The result was a dozen pamphlets, issued in 1910 as *The Fundamentals* and circulated by means of the Stewarts' money. These pamphlets set forth a version of the Five Points and gave the name "Fundamentalism" to the growing antievolutionary movement.

This "Adamist" movement expanded swiftly after the First World War. Its most prominent and in many ways most attractive leader was William Jennings Bryan (1860-1925): lawyer, politician, orator, reformer, Sunday-school teacher, lecturer, journalist, editor, real-estate speculator, antiliquor crusader, thrice-defeated candidate for President, onetime Secretary of State, and prominent Presbyterian layman.

Bryan was an upright, virtuous, kindly, likable, eloquent, magnetic,

and majestically wrong-headed man. Fairly intelligent in politics, journalism, and real estate, he was wholly superficial, with unshakable faith in slogans as solutions to problems. He could not follow scientific reasoning or grasp any idea that conflicted with his preconceived opinions.

Like other Adamist leaders, Bryan wrote, lectured, and appeared before legislatures to urge bills to ban the teaching of evolution. Probably the greatest American orator of all time, he was much more moderate and reasonable than some of his followers, who wanted to forbid mere belief in evolution on pain of crucifixion or the stake. In private, he showed himself less than dogmatically sure of his Adamism, remarking to younger associates in the Scopes case:

"Now, you boys will probably live to see whether or not evolution is true. I won't."

In early 1925 the farmer-legislator John Washington Butler introduced into Tennessee's House of Representatives an antievolutionary bill, which passed without debate, 75 to 5. Many non-Fundamentalists voted for it to curry Fundamentalist votes or to do a favor for good old Butler, expecting the Senate to kill the bill. Pursuing the same logic, the Senate passed the bill, expecting the governor to veto it. At first dismayed, Governor Peay, under pressure from his fellow Baptists, signed it on March 21, 1925. He issued a rambling, waffling statement, asserting: "Nobody believes that it is going to be an active statute." He could hardly have been more wrong.

On May 4th[2] the Chattanooga *Daily Times* announced that the American Civil Liberties Union would finance the defense of a case to test the constitutionality of the Butler Act. Next day, an argument arose in Robinson's Drug Store in the small town of Dayton, in southeastern Tennessee. The disputants were Walter White, superintendent of schools; Sue K. Hicks, a young lawyer (male despite his name); and George W. Rappleyea, a young New Yorker who managed a bankrupt local coal company. Rappyleyea, one of the few evolutionists in town, opposed the law; White and Hicks, although not extreme Fundamentalists, favored it.

Why not, said Rappleyea, have the proposed test case right here? It would put Dayton on the map! He appealed to White:

"Well, we will make it a sporting proposition. As it is, the law is not enforced. If you win, it will be enforced. If I win, the law will be repealed. We're game, aren't we?"

He soon won over Hicks and White. For victim they chose their friend John Thomas Scopes, a 24-year-old science teacher in the Dayton High School. Unmarried, modest, and popular, Scopes was an obvious choice. Summoned to the drug store, he was talked into accepting his sacrificial role. Rappleyea wired the ACLU about his plan. Receiving a favorable reply, he swore out a warrant against Scopes.

Scopes retained two Tennessean lawyers to defend him. Then Hicks wrote Bryan, offering him a place on the prosecution. When Bryan accepted, Clarence Darrow, America's best known defense attorney and a noted agnostic, offered his services and those of his friend Dudley Field Malone, New York divorce lawyer, to the defense. They were joined by Arthur Garfield Hays, attorney for the ACLU.

The trial did indeed put Dayton on the map. Over a hundred journalists arrived, including two Britons and the celebrated gadfly H. L. Mencken. While the defense lawyers made a rather good impression on the townsfolk, Mencken so infuriated them by writing about them in his dispatches to the Baltimore *Sun*, as "gaping primates" and "anthropoid rabble" that he narrowly escaped a coat of tar and feathers.

A swarm of evangelists, cultists, eccentrics, fanatics, and certifiable lunatics descended on Dayton, converting that neat, quiet, conventional, humdrum little town into a madder tea party than Lewis Carroll ever imagined. A white-whiskered prophet announced himself as John the Baptist the Third. Showmen appeared with chimpanzees, which they tried to rent to the litigants to lend force to their arguments.

In blistering heat the trial began on July 10, 1925. The Fundamentalist judge, John T. Raulston, tried to run a fair trial. This proved difficult, because of the circus atmosphere and because the judge himself was more than a little bewildered.

The first three days were devoted to the choice of the jury and to pretrial maneuvers, with endless hairsplitting legalistic arguments. On the 15th, the trial proper began. Schoolboy witnesses, coached by Darrow, testified that Scopes had taught them evolution.

The defense had persuaded a dozen scholars and scientists to come to Dayton as expert witnesses. When the defense proposed to call them to prove that evolution was a fact and that it did not necessarily conflict with a liberal reading of the Bible, the prosecution objected. After a day of oratory and argument, Raulston ruled out the

scientific witnesses. Darrow lost his temper and insulted the judge, who cited him for contempt. The next day, Darrow apologized and was forgiven.

On the afternoon of the 20th, fearing for the safety of the jam-packed and picturesquely ugly old courthouse building, Raulston moved the trial out on the courthouse lawn. Then the defense played its trump. Hays said:

"The defense desires to call Mr. Bryan as a witness..."

The judge goggled, and Bryan's palm leaf fan froze in his hand. The other prosecution lawyers jumped up, shouting that it was unheard-of to call, as a witness, an attorney in that same case. But Bryan agreed to testify.

For an hour and a half, Darrow grilled Bryan about the Bible and the origins of man and of civilization. Did the whale swallow Jonah? Had Joshua stopped the earth from spinning? Where had Cain obtained his wife? Bryan sweated and evaded but was forced to admit ignorance of many subjects on which he had long pontificated.

To the dismay of the Fundamentalists, Darrow trapped Bryan into admitting that the earth might be, not a mere few thousand years old, but millions. Lastly, how did the serpent walk before God told it to go on its belly? Did it hop on its tail? The crowd guffawed. Bryan rose, shaking his fist and screaming:

"The only purpose of Mr. Darrow here is to slur at the Bible..."

Darrow roared back; the crowd teetered on the edge of a riot. With a smash of his gavel, Raulston adjourned court.

On the 21st Raulston expunged the Bryan-Darrow debate from the record and called in the jury, who to their vexation had been exiled from the courtroom during most of the trial. Darrow hinted that he wanted a guilty verdict to make possible an appeal. The jury obliged, and Raulston fined Scopes $100.

The hosts dispersed, leaving Dayton to wonder whether the publicity it had gained was the kind it had wished. Five days after the trial, Bryan quietly died in his sleep in Dayton. Scopes became a graduate student at the University of Chicago and later a petroleum geologist. He confessed that he had never actually taught the evolutionary lesson with which he was charged; he had been too busy coaching the football team.

The defense appealed to the Supreme Court of Tennessee. On January 15, 1927, this court announced its verdict. Of the five justices, one disqualified himself

and the other four split three ways. The prevailing opinion was that the law was constitutional and violated, but that Raulston had committed a legal blunder in levying the fine. The court remanded the case to the lower court and advised the district attorney to nollepros it. The district attorney complied, leaving the law intact and Scopes unpunished.

The months after the Monkey Trial saw a surge of antievolutionary activity. A host of Adamist societies blossomed, among them the Bible Crusaders, the Bryan Bible League, the Defenders of the Christian Faith, and the weirdly misnamed American Science Foundation. They talked of an antievolutionary amendment to the U.S. Constitution. In Mississippi, in February, 1926, a bill like the Butler Act became law.

During 1927, however, the Fundamentalist movement began to flag. Of the monkey bills presented to twelve state legislatures during this time, only Mississippi's passed. Delaware's monkey bill of 1927 was referred to the Committee on Fish, Game, and Oysters, where it died a quiet death. The last triumph of Fundamentalism was the Rotenberry Act in Arkansas, passed by referendum when it failed to get through the legislature.

One success of the Fundamentalists, little noted at the time, was in persuading many local school boards not to buy evolutionary textbooks. Many publishers of high-school books, not wishing to lose sales in those school systems, issued biology texts that ignored Darwinism or brushed over it with brief, meaningless platitudes. Thus a whole generation of young Americans grew up without hearing the scientific side of the question. In accordance with usual human behavior, they were loath to change their ideas later regardless of the evidence.

The antics of some leading antievolutionists were a factor in the decline of the movement. For instance, in 1926, J. Frank Norris, the gunman-preacher of Forth Worth, killed a man who went unarmed to his office to protest Norris's scurrilous attacks on the man's Catholic friends. With the support of the Grand Dragon of the local Klan, Norris was acquitted on grounds of self-defense.

Aimee Semple McPherson, evangelist of the Angelus Temple in Los Angeles, vanished. She reappeared in Mexico with a tale of kidnaping by the evil forces, including evolutionists, whom she had been denouncing. It later transpired that she had been taking a holiday from Christian austerity with her former radio operator in a love nest at Carmel-by-the-Sea.

Other crusaders were jailed for such unsaintly acts as mail fraud and stealing liquor from government warehouses.

Adamists long remained strong in the South and Southwest, where they were often allied with political extremists of the radical right. In 1964 the Rev. Aubrey Moore tried but failed to get enough signatures for a monkey law in Arizona. In California, in 1969, the conservative majority on the State Board of Education and Max Rafferty, the State Superintendent of Education, tried to compel the schools to present the Adamist view of man's past as an "alternative" to the Darwinian one. This effort petered out when Dr. Rafferty was defeated for reelection, but as I write, they are making another attempt.

On November 12, 1968, Justice Fortas delivered the opinion of the Supreme Court in the case of *Epperson v. Arkansas.* The majority held that, since the purpose of the Rotenberry Act was to forbid any teaching that gainsaid the Fundamentalist view of Genesis, the act in effect established a religious doctrine, as forbidden by the First and Fourteenth Amendments to the U.S. Constitution. The Court declared:

"It is clear that fundamentalist sectarian conviction was and is the law's reason for existence." There the law was unconstitutional and "The judgment of the Supreme Court of Arkansas is

Reversed."[3]

In December, 1970, the State Supreme Court of Mississippi, citing *Epperson v. Arkansas,* invalidated that state's monkey law. For practical purposes, this ended the Monkey War, albeit occasional guerrilla raids by Adamists may be expected for a long time to come.

However advanced thinkers may deplore the fact, conflicts like the Monkey War are part of normal human behavior. Any new doctrine that conflicts with basic, well-established beliefs evokes violent opposition, be the evidence ever so weighty or the arguments in its favor ever so cogent.

At the same time this ingrained human conservatism does serve a useful purpose. It helps to weed out the swarming host of beguiling new ideas that constantly spring up but turn out to be wrong. If people were completely tolerant of and hospitable to new ideas, the result would not be the scientific advance of mankind. It would be the proliferation, even more luxuriantly than now, of screwball theories and pseudoscientific cults. The Churchwards, the Velikovskys, and the Jeane Dixons would multiply a hundredfold, and real scientific

discoveries would be lost in the crush and drowned out by the shouting.

Considering the record of mankind in such doctrinal struggles, the American evolutionary conflict seems comparatively mild, humane, and enlightened. After all, nobody was burned at the stake.

NOTES

1. I attended the hearing, took notes, and obtained a transcript of the arguments from the Alderson Reporting Co. of Washington, D.C.
2. Not April 4th, as by an inexcusable error I have written elsewhere.
3. Supreme Court of the United States, No. 7 — October Term, 1968, p. 12.

At the Science Fiction Writers of America awards banquet this spring, Poul Anderson received a Nebula award for best novelet ("Goat Song," F&SF February 1972), the second consecutive year that Mr. Anderson has taken a Nebula for an F&SF story. This new Anderson is an unusually grim story; in the words of the author, "it starts at the bottom and continues on downhill."

The Pugilist

by POUL ANDERSON

They hadn't risked putting me in the base hospital or any other regular medical facility. Besides, the operation was very simple. Needed beforehand: a knife, an anesthetic, and a supply of coagulant and enzyme to promote healing inside a week. Needed afterward: drugs and skillful talking to, till I got over being dangerous to myself or my surroundings. The windows of my room were barred; I was brought soft plastic utensils with my meals; my clothes were pajamas and paper slippers; and two husky men sat in the hall near my open door. Probably I was also monitored on closed-circuit TV.

There was stuff to read, especially magazines which carried stories about the regeneration center in Moscow. Those articles bore down on the work being still largely experimental. A structure as complicated as a hand, a leg, or an eye wouldn't yet grow back right, though surgery helped. However, results were excellent with the more basic tissues and organs. I saw pics of a girl whose original liver got mercury poisoned, a man who'd had most of his skin burned off in an accident, beaming from the pages as good as new, or so the text claimed.

Mannix must have gone to some trouble to find those issues. The latest was from months ago. You didn't see much now that wasn't related to the war.

Near the end of that week my male nurse gave me a letter from Bonnie. It was addressed to me right here, John Reed AFB, Willits, California 95491, in her own

slanty-rounded handwriting, and according to the postmark — when I remembered to check that several hours later — had doubtless been mailed from our place, not 30 kilometers away. The envelope was stamped EXAMINED, but I didn't think the letter had been dictated. It was too her. About how the kids and the roses were doing, and the co-op where she worked was hoping the Recreation Bureau would okay its employees vacationing at Lake Pillsbury this year, and hamburger had been available day before yesterday, and she'd spent three hours with her grandmother's old cookbook deciding how to fix it, "and if only you'd been across the table, you and your funny slow smile; oh, do finish soon, Jim-Jim, and c'mon home!"

I read slowly, the first few times. My hands shook so much. Later I crawled into bed and pulled the sheet over my face against bugeyes.

Mannix arrived next morning. He's small and chipper, always in the neatest of civies, his round red face always amiable — almost always — under a fluff of white hair. "Well, how are you, Colonel Dowling?" he exclaimed as he bounced in. The door didn't close behind him at once. My guards would watch awhile. I stand 190 cm in my bare feet and black belt.

I didn't rise from my armchair, though. Wasn't sure I could. It was as if that scalpel had, actually, teased the bones out of me. Windows stood open to a cool breeze and a bright sky. Beyond the neat buildings and electric fence of the base I could see hills green with forest roll up and up toward the blueness of the Sierra. It felt like painted scenery. Bonnie acts in civic theater.

Mannix settled on the edge of my bed. "Dr. Arneson tells me you can be discharged anytime, fit for any duty," he said. "Congratulations."

"Yeah," I managed to say, though I could hear how feeble the sarcasm was. "You'll send me right back to my office."

"Or to your family? You have a charming wife."

I stirred and made a noise. The guard in the entrance looked uneasy and dropped a hand to his stunner. Mannix lifted a palm. "If you please," he chirped. "I'm not baiting you. Your case presents certain difficulties. As you well know."

I'd imagined I was, not calm, but numb. I was wrong. Blackness took me in a wave that roared. "Why, why, why?" I felt rip my throat. "Why not just shoot me and be done?"

Mannix waited till I sank back. The wind whined in and out of me. Sweat plastered the pajamas to my skin. It reeked.

He offered me a cigarette. At first I ignored him, then accepted both it and the flare of his lighter, and dragged my lungs full of acridness. Mannix said mildly, "The surgical procedure was necessary, Colonel. You were told that. Diagnosis showed cancer."

"The f-f-f — the hell it did," I croaked.

"I believe the removed part is still in alcohol in the laboratory," Mannix said. "Would you like to see it?"

I touched the hot end of the cigarette to the back of my hand. "No," I answered.

"And," Mannix said, "regeneration is possible."

"In Moscow."

"True, the Lomonosov Institute has the world's only such capability to date. I daresay you've been reading about that." He nodded at the gay-colored covers on the end table. "The idea was to give you hope. Still...you are an intelligent, technically educated man. You realize it isn't simple to make the adult DNA repeat what it did in the fetus, and not repeat identically, either. Not only are chemicals, catalysts, synthevirus required; the whole process must be monitored and computer-controlled. No wonder they concentrate on research and save clinical treatment for the most urgent cases." He paused. "Or the most deserving."

"I saw this coming," I mumbled.

Mannix shrugged. "Well, when you are charged with treasonable conspiracy against the People's Republic of the United States —" That was one phrase he had to roll out in full, every time.

"You haven't proved anything," I said mechanically.

"The fact of your immunity to the usual interrogation techniques is, shall we say, indicative." He grew arch again. "Consider your own self-interest. Let the war in the Soviet Union break into uncontrolled violence, and where is Moscow? Where's the Institute? The matter is quite vital, Colonel."

"What can I do?" I asked out of hollowness.

Mannnix chuckled. "Depends on what you know, what you are. Tell me and we'll lay plans. Eh?" He cocked his head. Bonnie, who knew him merely as a political officer, to be invited to dinner now and then on that account, liked him. She said he ought to play the reformed Scrooge, except he'd be no good as the earlier, capitalist Scrooge, before the Spirits of the New Year visited him.

"I've been studying your file personally," he went on. "And I'm blessed if I can see why you should have gotten involved in this unsavory business. A fine young man who's galloped through his

promotions at the rate you have. It's not as if your background held anything un-American. How did you ever get sucked in?"

He bore down a little on the word "sucked." That broke me.

I'd never guessed how delicious it is to let go, to admit — fully admit and take into you — the fact that you're whipped. It was like, well, like the nightly surrender to Bonnie. I wanted to laugh and cry and kiss the old man's hands. Instead, stupidly, all I could say was, "I don't know."

The answer must lie deep in my past.

I was a country boy, raised in the backwoods of Georgia, red earth, gaunt murky-green pines, cardinals and mockingbirds, and a secret fishing hole. The government had tried to modernize our area before I was born, but it didn't lend itself to collectives. So mostly we were allowed to keep our small farms, stores, sawmills, and repair shops on leasehold. The schools got taped lectures on history, ideology, and the rest. However, this isn't the same as having trained political educators in the flesh. Likewise, our local scoutmaster was lax about everything except woodcraft. And while my grandfather mumbled a little about damn niggers everywhere like nothing since Reconstruction, he used to play poker with black Sheriff Jackson. Sometimes he, Granddad, that is, would take on a bit too much moon and rant about how poor, decent Joe Jackson was being used. My parents saw to it that no outsiders heard him.

All in all, we lived in a pretty archaic fashion. I understand the section has since been brought up to date.

Now patriotism is as Southern as hominy grits. They have trouble realizing this further north. They harp on the Confederate Rebellion, though actually — as our teachers explained to us — folk in those days were resisting Yankee capitalism, and the slaveholders were a minority who milked the common man's love for his land. True, when the People's Republlic was proclaimed, there was some hothead talk, even some shooting. But there was never any need for the heavy concentration of marshals and deputies they sent down to our states. Damn it, we still belonged.

We were the topmost rejoicers when word came: the Treaty of Berlin was amended; the United States could maintain armed forces well above police level and was welcomed to the solid front of peace-loving nations against the Sino-Japanese revisionists.

Grandad turned into a wild man in a stiff jacket. He'd fought for the imperialist regime once,

when it tried to suppress the Mekong Revolution, though he never said a lot about that. Who would? (I suppose Dad was lucky, just ten years old at the time of the Sacred War, which thus to him was like a hurricane or some other natural spasm. Of course, the hungry years afterward stunted his growth.) "This's the first step!" Granddad cried to us. "The first step back! You hear?" He stood outdoors waving his cane; autumn sumac a shout of red behind him, and the wind shouted too, till I imagined old bugles blowing again at Valley Forge and Shiloh and Omaha Beach. Maybe that was when I first thought I might make the army a career.

A year later, units of the new service held maneuvers beneath Stone Mountain. Granddad had been tirelessly reading and watching news, writing letters, making phone calls from the village booth, keeping in touch. Hence he knew about the event well in advance, knew the public would be invited to wach from certain areas, and saved his money and his travel allowance till he could not only go himself but take me along.

And it was exciting, oh, yes, really beautiful when the troops went by in ground-effect carriers like magic boats, the dinosaur tanks rumbled past, the superjets screamed low overhead, while the Star and Stripes waved before those riders carved in the face of the mountain.

Except — the artillery opened up. Granddad and I were quite a ways off; the guns were toys in our eyes; we'd see a needle-thin flash, a puff where the shell exploded; long, long afterward, distance-shrunken thunder reached us. The monument was slow to crumble away. That night, in the tourist dorm, I heard a speech about how destroying that symbol of oppression marked the dawn of our glorious new day. I didn't pay much attention. I kept seeing Granddad, there under the Georgia sky, suddenly withered and old.

Nobody proposed I go home to Bonnie. Least of all myself. Whether or not I could have made an excuse for...not revealing to her what had happened...I couldn't have endured it. I did say, over and over, that she had no idea I was in the Stephen Decatur Society. This was true. Not that she would have betrayed me had she known, Bonnie whose heart was as bright as her hair. I was already too far in to back out when first we met, too weak and selfish to run from her; but I was never guilty of giving her guilty knowledge.

"She and your children must have had indications," Mannix murmured. "If only subliminal.

They might be in need of correctional instruction."

I whimpered before him. There are camps and camps, of course, but La Pasionara is the usual one for West Coast offenders. I've met a few of the few who've been released from it. They are terribly obedient, hard-working, and close-mouthed. Most lack teeth. Rumor says conditions can make young girls go directly from puberty to menopause. I have a daughter.

Mannix smiled. "At ease, Jim. Your family's departure would tip off the Society."

I blubbered my thanks.

"And, to be sure, you may be granted a chance to win pardon, if we can find a proper way," he soothed me. "Suggestions?"

"I, I, I can tell you...what I know —"

"An unimaginative minimum. Let us explore you for a start. Maybe we'll hit on a unique deed you can do." Mannix drummed his desktop.

We had moved to his office, which was lush enough that the portraits of Lenin and the President looked startingly austere. I sat snug and warm in a water chair, cigarettes, coffee, brandy to hand, nobody before me or behind me except this kindly white-haired man and his recorder. But I was still gulping, sniffing, choking, and shivering, still too dazed to think. My lips tingled and my body felt slack and heavy.

"What brought you into the gang, Jim?" he asked as if in simple curiosity.

I gaped at him. I'd told him I didn't know. But maybe I did. Slowly I groped around in my head. The roots of everything go back to before you were born.

I'd inquired about the origins of the organization, in my early days with it. Nobody knew much except that it hadn't been important before Sotomayor took the leadership — whoever, wherever he was. Until him, it was a spontaneous thing.

Probably it hadn't begun right after the Sacred War. Americans had done little except pick up pieces, those first years. They were too stunned when the Soviet missiles knocked out their second-strike capability and all at once their cities were hostages for the good behavior of their politicians and submarines. They were too relieved when no occupation followed, aside from inspectors and White House advisors who made sure the treaty limitations on armaments were observed. (Oh, several generals and the like were hanged as war criminals.) True, the Soviets had taken a beating from what U.S. nukes did get through, sufficient that they couldn't control

China or, later, a China-sponsored Japanese S.S.R. The leniency shown Americans was not the less welcome for being due to a shortage of troops.

Oath-brothers had told me how they were attracted by the mutterings of friends, and presently recruited, after Moscow informed Washington that John Halpern would be an unacceptable candidate for President in the next election. Others joined in reaction against a collectivist sentiment whose growth was hothouse-forced by government, schools, and universities.

I remember how Granddad growled, on a day when we were alone in the woods and I'd asked him about that period:

"The old order was blamed for the war and war's consequences, Jimmy. Militarists, capitalists, imperialists, racists, bourgeoisie. Nobody heard any different any more. Those who'd've argued weren't gettin' published or on the air, nothin'." He drew on his pipe. Muscles bunched in the angle of his jaw. "Yeah, everybody was bein' blamed — except the liberals who'd worked to lower our guard so their snug dreams wouldn't be interrupted, the conservatives who helped 'em so's to save a few wretched tax dollars, the radicals who disrupted the country, the copouts who lifted no finger —" The bit snapped between his teeth. He stooped for the bowl and squinted at it ruefully while his heel ground out the scattered ashes. At last he sighed. "Don't forget what I've told you, Jimmy. But bury it deep, like a seed."

I can't say if he was correct. My life was not his. I wasn't born when the Constitutional Convention proclaimed the People's Republic. Nor did I ever take a strong interest in politics.

In fact, my recruitment was glacier gradual. In West Point I discovered step by step that my best friends were those who wanted us to become a first-class power again, not conquer anybody else, merely cut the Russian apron strings... Clandestine bitching sessions, winked at by our officers, slowly turned into clandestine meetings which hinted at eventual action. An illegal newsletter circulated...After graduation and assignment, I did trivial favors, covering up for this or that comrade who might otherwise be in trouble, supplying bits of classified information to fellows who said they were blocked from what they needed by stupid bureaucrats, hearing till I believed it that the proscribed and abhorred Stephen Decatur Society was not counterrevolutionary, not fascist, simply patriotic and misunderstood....

The final commitment to

something like that is when you make an excuse to disappear for a month — in any case, a back-packing trip with a couple of guys, though my C.O. warned me that asocial furloughs might hurt my career — and you get flitted to an unspecified place where they induct you. One of the psychotechs there explained that the treatment, drugs, sleep deprivation, shock conditioning, meant more than installing a set of reflexes. Those guarantee you can't be made to blab involuntarily, under serum or torture. But the suffering has a positive effect too: it's a rite of passage. Afterward you can't likely be bribed either.

Likely. The figures may change on a man's price tag, but he never loses it.

I don't yet know how I was detected. A Decaturist courier had cautioned my cell about micro-miniature listeners which can be slipped a man in his food, operate off body heat, and take days to be eliminated. With my work load, both official on account of the crisis and after hours in preparing for our coup, I must have gotten careless.

Presumably, though, I was caught by luck rather than suspicion, in a spot check. If the political police had identified any fair-sized number of conspirators, Mannix wouldn't be as anxious to use me as he was.

Jarred, I realized I hadn't responded to his last inquiry. "Sir," I begged, "honest, I'm no traitor. I wish our country had more voice in its own affairs. Nothing else."

"A Titoist." Recognizing my glance of dull surprise at the new word, he waved it off. "Never mind. I forgot they've re-improved the history text since I was young. Let's stick to practical matters, then."

"I, I can...identify for you — those in my cell." Jack, whose wife was pregnant; Bill who never spared everyday helpfulness; Tim... "B-but there must be others on the base and in the area, and, well, some of them must know *I* belong."

"Right." Mannix nodded. "We'll stay our hand as regards those you have met. Mustn't alert the organization. It does seem to be efficient. That devil Sotomayor — Well. Let's get on."

He was patient. Hours went by before I could talk coherently.

At that time he had occasion to turn harsh. Leaning across his desk he snapped: "You considered yourself a patriot. Nevertheless you plotted mutiny."

I cringed. "No, sir. Really. I mean, the idea was — was —"

"Was what?" In his apple face stood the eyes of Old Scrooge.

"Sir, when civil war breaks out in the Motherland — those Vasiliev and Kunin factions —"

"Party versus army."

"What?" I don't know why I tried to argue. "Sir, last I heard, Vasiliev's got everything west of the, uh, Yenisei...millions of men under arms, effective control of West Europe —"

"You do not understand how to interpret events. The essential struggle is between those who are loyal to the principles of the party, and those who would substitute military dictatorship." His finger jabbed. "Like you, Dowling."

We had told each other in our secret meetings, we Decatur folk, better government by colonels than commissioners.

"No, sir, no, sir," I protested. "Look, I'm only a soldier. But I see...I smell the factions here too...the air's rotten with plotting... and what about in Washington? I mean, do we *know* what orders we'll get, any day now? And what is the situation in Siberia?"

"You have repeatedly been informed, the front is stabilized and relatively quiet."

My wits weren't so shorted out that I hinted the official media might ever shade the truth. I did reply: "Sir, I'm a missileman. In the, uh, the opinion of every colleague I've talked with — most of them loyal, I'm certain — what stability the front has got is due to the fact both sides have ample rockets, lasers, the works. If they both cut loose, there'd be mutual wipeout. Unless we Americans — We hold the balance." Breath shuddered into me. "Who's going to order our birds targeted where?"

Mannix sat for a while that grew very quiet. I sat listening to my heart stutter. Weariness filled me like water a sponge. I wanted to crawl off and curl up in darkness, alone, more than I wanted Bonnie or my children or tomorrow's sunrise or that which had been taken from me. But I had to keep answering.

At last he asked, softly, almost mildly, "Is this your honest evaluation? Is this why you were in a conspiracy to seize control of the big weapons?"

"Yes, sir." A vacuum passed through me. I shook myself free of it. "Yes, sir. I think my belief — the belief of most men involved — is, uh, if a, uh, a responsible group, led by experts, takes over the missile bases for the time being... those birds won't get misused. Like by, say, the wrong side in Washington pulling a coup —" I jerked my head upright.

"Your superiors in the cabal have claimed to you that the object is to keep the birds in their nests, keep America out of the war," Mannix said. "How do you know they've told you the truth?"

I thought I did. Did I? Was I? Big soft waves came rolling.

"Jim," Mannix said earnestly, "they've tricked you through your whole adult life. Nevertheless, what we've learned shows me you're important to them. You're slated for commander here at Reed, once the mutiny begins. I wouldn't be surprised but what they've been grooming you for years, and that's how come your rapid rise in the service. Clues there — But as for now, you must have ways to get in touch with higher echelons."

"Uh-huh," I said. "Uh-huh. Uh-huh."

Mannix grew genial. "Let's discuss that, shall we?"

I don't remember being conducted to bed. What stands before me is how I woke, gasping for air, nothing in my eyes except night and nothing in the hand that grabbed at my groin.

I rolled over on my belly, clutched the pillow and crammed it into my mouth. Bonnie, Bonnie, I said, they've left me this one way back to you. I pledge allegiance to you, Bonnie, and to the Chuck and Joanlet you have mothered, and *screw* the rest of the world!

("Even for a man in his thirties," said a hundred teachers, intellectuals, officials, entertainers out of my years, "or even for an adolescent, romantic atavism is downright unpatriotic. The most important thing in man's existence is his duty to the people and the molding of their future." The echoes went on and on.)

I've been a rat, I said to my three, to risk — and lose — the few things which counted, all of which were ours. Bonnie, it's no excuse for my staying with the Decaturists, that I'd see you turn white at this restriction or that command to volunteer service or yonder midnight vanishing of a neighbor. No excuse, nothing but a rationalization. I've led us down my rathole, and now my duty is to get us out, in whatever way I am able.

("There should be little bloodshed," the liaison man told our cell; we were not shown his face. "The war is expected to remain stalemated for the several weeks we need. When the moment is right, our folk will rise, disarm and expel everybody who isn't with us, and dig in. We can hope to seize most of the rocket bases. Given the quick retargetability of every modern bird, we will then be in a position to hit any point on Earth and practically anything in orbit. However, we won't. The threat — plus the short-range weapons — should protect us from counterattack. We will sit tight and thus realize our objective: to keep the blood of possibly millions off American hands, while giving America the self-determination that once was hers.")

Turn the Decaturists over to the Communists. Let all the ists kill each other off and leave human beings in peace.

("My friend, my friend," Mannix sighed, "you cannot be naive enough to suppose the Asians have no hand in this. You yourself, I find, were involved in our rocket-scattering of munitions across the rebellious parts of India. Should they not make use of trouble in our coalition? Have they not been advising, subsidizing, equipping, infiltrating the upper leadership of your oh-so-patriotic Decatur Society? Let the Soviet Union ruin itself — which is the likeliest outcome if America doesn't intervene — let that happen, and, yes, America could probably become the boss of the Western Hemisphere. But we're not equipped to conquer the Eastern. You're aware of that. The gooks would inherit. The Russians may gripe you. You may consider our native leaders their puppets. But at least they're white; at least they share a tradition with us. Why, they helped us back on our feet, Jim, after the war. They let us rearm, they aided it, precisely so we could cover each other's backs, they in the Old World, we in the New...Can you prove your Society isn't a Jappochink tool?")

No, but I can prove we have rockets here so we'll draw some of the Jappochink fire in the event of a big war. — They're working on suicide regardless of what I do, Bonnie. America would already have declared for one splinter or the other, if America weren't likewise divided. Remember your Shakespeare? Well, Caesar has conquered the available world and is dead; Anthony and Octavian are disputing his loot. What paralyzes America is — has to be — a silent struggle in Washington. Maybe not altogether silent; I get word of troop movements, "military exercises" under separate commands, throughout the Atlantic states.... Where can we hide, Bonnie?

("We have reason to believe," said the political lecturer to us at assembly, "that the conflict was instigated, to a considerable degree at least, by *agents provacateurs* of the Asian deviationists, who spent the past twenty years or more posing as Soviet citizens and worming their way close to the top. With our whole hearts we trust the dispute can be settled peacefully. Failing that, gentlemen, your duty will be to strike as ordered by your government, to end this war before irrevocable damage has been done the Motherland.")

There is no place to hide, Bonnie Brighteyes. Nor can we bravely join the side of the angels. There are no angels either.

("Yeah, sure, I've heard the

same," said Jack who belonged to my cell. "If we grab those bases and refuse to join this fight, peace'll have to be negotiated, lives and cultural treasures 'ull be spared, the balance of power 'ull be preserved, yeah, yeah. — Think, man. What do you suppose Sotomayor and the rest really want? Isn't it for the war to grow hot — incandescent? Never mind who tries the first strike. The Kuninists might, thinking they'd better take advantage of a U.S. junta fairly sympathetic to them before it's overthrown. Or the Visilievists might, they being party types who can't well afford a compromise. Either way, no matter who comes out on top, the Soviets overnight turn themselves into the junior member of our partnership. Then *we* tell *them* what to do for a change.")

Not that I am altogether cynical, Bonnie. I don't choose to believe we've brought Chuck and Joan into a world of sheer wolves and jackals — when you've said you wish for a couple more children. No, I've simply changed my mind, simply had demonstrated to me that our best chance — mankind's best chance — lies with the legitimate government of the United States as established by the People's Constitutional Convention.

Next day Mannix turned me over to his interrogation specialists, who asked me more questions than I'd known I had answers for. A trankstim pill kept me alert but unemotional, as if I were operating myself by remote control.

Among other items, I showed them how a Decaturist who had access to the right equipment made contact with fellows elsewhere, whom he'd probably never met, or with higher-ups whom he definitely hadn't. The method had been considered by political police technicians, but they'd failed to devise any means of coping.

Problem: How do you maintain a network of illicit communications?

In practice you mostly use the old-fashioned mail drop. It's unfeasible to read the entire mails. The authorities must settle for watching the correspondence of suspicious individuals, and these may have ways of posting and collecting letters unobserved.

Yet sometimes you need to send a message fast. The telephone's no good, of course, since computers became able to monitor every conversation continuously. However those same machines, or their cousins, can be your carriers.

Remember, we have millions of computers around these days, nationally interconnected. They do drudge work like record keeping

and billing; they operate automated plants; they calculate for governmental planners and R & D workers; they integrate organizations; they keep day-by-day track of each citizen; etc., etc. Still more than in the case of the mails, the volume of data transmissions would swamp human overseers.

Give suitable codes, programmers and other technicians can send practically anything practically anywhere. The printout is just another string of numbers to those who can't read it. Once it has been read, the card is recycled and the electronic traces are wiped as per routine. That message leaves the office in a single skull.

Naturally, you save this capability for your highest priority calls. I'd used it a few times, attracting no attention, since my job on base frequently required me to prepare or receive top-secret calculations.

I couldn't give Mannix's men any code except the latest that had been given me. Every such message was re-encoded en route, according to self-changing programs buried deep down in the banks of the machines concerned. I could, though, put him in touch with somebody close to Sotomayor. Or, rather, I could put myself in touch.

What would happen thereafter was uncertain. We couldn't develop an exact plan. My directive was to do my best, and if my best was good enough, I'd be pardoned and rewarded.

I was rehearsed in my cover story till I was letter perfect, and given a few items like phone numbers to learn. Simulators and reinforcement techniques made this quick.

Perhaps my oath-brothers would cut my throat immediately, as a regrettable precaution. That didn't seem to matter. The drug left me no particular emotion except a desire to get the business done.

At a minimum, I was sure to be interrogated, strip-searched, encephalogrammed, X-rayed, checked for metal and radioactivity. Perhaps blood, saliva, urine, and spinal fluid would be sampled. Agents have used pharmaceuticals and implants for too many years.

Nevertheless Mannix's outfit had a weapon prepared for me. It was not one the army had been told about. I wondered what else the political police labs were working on. I also wondered if various prominent men, who might have been awkward to denounce, had really died of strokes or heart attacks.

"I can't tell you details," said a technician. "With your education, you can figure out the general idea for youself. It's a micro version of the fission gun, enclosed in lead to baffle detectors. You squeeze —

you'll be shown how — and the system opens; a radioactive bombards another material which releases neutrons which touch off the fissionable atoms in one of ten successive chambers."

Despite my chemical coolness, awe drew a whistle from me. Given the right isotopes, configurations, and shielding, critical mass gets down to grams, and you can direct the energy through a minilaser. I'd known that. In this sytem, the lower limit must be milligrams; and the efficiency must approach one hundred percent, if you could operate it right out of your own body.

Still — "You do have components that'll register if I'm checked very closely," I said.

The technician grinned. "I doubt you will be, where we have in mind. They'll load you tomorrow morning."

Because I'd need practice in the weapon, I wasn't drugged then. I'd expected to be embarrassed. But when I entered an instrument-crammed concrete room after being unable to eat breakfast, I suddenly began shaking.

Two P.P. men I hadn't met before waited for me. One wore a lab coat, one a medic's tunic. My escort said, "Dowling," closed the door and left me alone with them.

Lab Coat was thin, bald, and sourpussed. "Okay, peel down and let's get started," he snapped.

Medic, who was a fattish blond, laughed — giggled, I thought in a gust of wanting to kill him. "Short arm inspection," he said.

Bonnie, I reminded myself, and dropped my clothes on a chair. Their eyes went to my crotch. Mine couldn't. I bit jaws and fists together and stared at the wall beyond them.

Medic sat down. "Over here," he ordered. I obeyed, stood before him, felt him finger what was left. "Ah," he chuckled. "Balls but no musket, eh?"

"Shut up, funny man," Lab Coat said and handed him a pair of calipers. I felt him measure the stump.

"They should've left more," Lab Coat complained. "At least two centimeters more."

"This glue could stick it straight onto his bellybutton," Medic said.

"Yeah, but the gadgets aren't rechargeable," Lab Coat retorted. "He'll go through four or five today before the final one, and nothing but elastic collars holding 'em in place. What a clot of a time I'll have fitting *them.*" He shuffled over to a workbench and got busy.

"Take a look at your new tool," Medic invited me. "Generous, eh? Be the envy of the neighborhood. And what a jolt for your wife."

The wave was red, not black, and tasted of blood. I lunged, laid fingers around his throat, and bawled — I can't remember — maybe, "Be quiet, you filthy fairy, before I kill you!"

He squealed, then gurgled. I shook him till his teeth rattled. Lab Coat came on the run. "Stop that!" he barked. "Stop or I'll call a guard!"

I let go, sank down on the floor — its chill flowed into my buttocks, up my spine, out along my rib cage — and struggled not to weep.

"You bastard," Medic chattered. "I'm gonna file charges. I am."

"You are not. Another peep and I'll report you." Lab Coat hunkered beside me, laid an arm around my shoulder, and said, "I understand, Dowling. It was heroic of you to volunteer. You'll get the real thing back when you're finished. Never forget that."

Volunteer?

Laughter exploded. I whooped, I howled, I rolled around and beat my fists on the concrete, my muscles ached from laughing when finally I won back to silence.

After that, and a short rest, I was calm — cold, even — and functioned well. My aim improved fast, till I could hole the center circle at every shot.

"You've ten charges," Lab Coat reminded me. "No more. The beam being narrow, the head's your best target. If the apparatus gets detected after all, or if you're in Dutch for some other reason and your ammo won't last, press inward from the end — like this — and it'll self-destruct. You'll be blown apart and escape a bad time. Understand? Repeat."

He didn't bother bidding me good-by at the end of the session. (Medic was too sulky for words.) No doubt he'd figured what sympathy to administer earlier. Efficiency is the P.P. ideal. Mannix, or somebody, must have ordered my gun prepared almost at the moment I was arrested, or likelier before.

My escort had waited, stolid, throughout those hours. Though I recognized it was a practical matter of security, I felt hand-lickingly grateful to Mannix that this fellow — that very few people — knew what I was.

The day after, I placed my call to the Decaturists. It was brief. I had news of supreme importance — the fact I'd vanished for almost a month made this plausible — and would stand by for transportation at such-and-such different rendezvous, such-and-such different times.

Just before the first of these, I swallowed a stim with a hint of trank, in one of those capsules

which attach to the stomach wall and spend the next three hundred hours dissolving. No one expected I'd need more time before the metabolic price had to be paid. A blood test would show its presence, but if I was carrying a vital message, would I not have sneaked me a supercharger?

I was not met, and went back to my room and waited. A side effect, when every cell worked at peak, was longing for Bonnie. Nothing sentimental; I loved her, I wanted her, I had to keep thrusting away memories of eyes, lips, breasts beneath my hand till my hand traveled downward....In the course of hours, I learned how to be a machine.

They came for me at the second spot on my list, a trifle past midnight. The place was a bar in a village of shops and rec centers near the base. It wasn't the sleek, state-owned New West, where I'd be recognized by officers, engineers, and party functionaries who could afford to patronize. This was a dim and dingy shack, run by a couple of workers on their own time, at the tough end of town. Music, mostly dirty songs, blared from a taper, ear-hurtingly loud, and the booze was rotgut served in glasses which seldom got washed. Nevertheless I had to push through the crowd and, practically, the smoke — pot as well as tobacco. The air smelled of sweat.

You see more of this kind of thing every year. I imagine the government only deplores the trend officially. People need some unorganized pleasure. Or, as the old joke goes, "What is the stage between socialism and communism called? Alcoholism."

A girl in a skimpy dress made me a business offer. She wasn't bad-looking, in a sleazy fashion, and last month I'd merely have said no, thanks. As it was, the drug in me didn't stop me from screaming, "Get away, you whore!" Scared, she backed off, and I drew looks from the men around. In cheap civies, I was supposed to be inconspicuous. Jim Dowling, officer, rocketeer, triple agent, boy wonder, ha! I elbowed my way onward to the bar. Two quick shots eased my shakes, and the racket around forgot me.

I'd almost decided to leave when a finger tapped my arm. A completely forgettable little man stood there. "Excuse me," he said. "Aren't you Sam Chalmers?"

"Uh, no, I'm his brother Roy." Beneath the once more cold surface, my pulse knocked harder.

"Well, well," he said. "Your father's told me a lot about you both. My name's Ralph Wagner."

"Yes, he's mentioned you. Glad to meet you, Comrade Wagner."

We shook hands and ad-libbed conversation a while. The countersigns we'd used were doubtless obsolete, but he'd allowed for my having been out of touch. Presently we left.

A car bearing Department of Security insignia was perched on the curb. Two much larger men, uniformed, waited inside. We joined them, the blowers whirred, and we were off. One man touched a button. A steel plate slid down and cut us three in the rear seat off from the driver. The windows I could see turned opaque. I had no need to know where we were bound. I did estimate our acceleration and thus our cruising speed. About 300 K.P.H. Going some, even for a Security vehicle!

From what Granddad had told me, this would have been lunacy before the war. Automobiles were so thick then that often they could barely crawl along. Among my earliest memories is that the government was still congratulating itself on having solved that problem.

Wind hooted around the shell. A slight vibration thrummed through my bones. The overhead light was singularly bleak. The big man on my left and the small man on my right crowded me.

"Okay," said the big man, "what happened?"

"I'll handle this," said he who named himself Wagner. The bruiser snapped his mouth shut and settled back. He was probably the one who'd kill me if that was deemed needful, but he was not the boss.

"We've been alarmed about you." Wagner spoke as gently as Mannix. In an acid way I liked the fact that he didn't smile.

I attempted humor in my loneliness: "I'd be alarmed if you hadn't been."

"Well?"

"I was called in for top-secret conferences. They've flitted me in and out — to Europe and back — under maximum security."

The big man formed an oath. Wagner waited.

"They've gotten wind of our project," I said.

"I don't know of any other vanishments than yours," Wagner answered, flat-voiced.

"Would you?" I challenged.

He shrugged. "Perhaps not."

"Actually," I continued, "I wasn't told about arrests and there may have been none. What they discussed was the Society, the Asians — they have a fixed idea the Peking-Tokyo Axis has taken over the Society — and what they called 'open indications.' The legal or semilegal talk you hear about 'socialist lawfulness,' 'American socialism,' and the rest. Roger Mannix — he turns out to be high

in the P.P., by the way, and a shrewd man; I recommend we try to knock him off — Mannix takes these signs more seriously than I'd imagined anybody in the government did." I cleared my throat. "Details at your convenience. The upshot is, the authorities decided there is a definite risk of a cabal seizing the rocket bases. Never mind whether they have the data to make that a completely logical conclusion. What counts is that it *is* their conclusion."

"And right, God damn it, right," muttered the big man. He slammed a fist on his knee.

"What do they propose to do?" Wagner asked, as if I'd revealed the government was considering a reduced egg ration.

"That was a...tough question." I stared at the blank, enclosing panel. "They dare not shut down the installations, under guard of P.P., who don't know a mass ratio from a hole in the ground. Nor dare they purge the personnel, hoping to be left with loyal skeleton crews — because they aren't yet sure who those crews had better be loyal to. Oh, I saw generals and commissioners scuttling around like toads in a chamber pot, believe me." Now I turned my head to confront his eyes. "And believe me," I added, "we were lucky they happened to include one Decatur man."

Again, under the tranquilization and the stimulation (how keenly I saw the wrinkles around his mouth, heard cleft air brawl, felt the shiver of speed, snuffed stale bodies, registered the prickle of hairs and sweat glands, the tightened belly muscles and self-seizing guts beneath!), fear fluttered in me, and under the fear I was hollow. The man on whom I had turned my back could put a gun muzzle at the base of my skull.

Wagner nodded. "Yes-s-s."

Though it was too early to allow myself relief, I saw I'd passed the first watchdog. The Society might have been keeping such close surveillance that Wagner would know there had in fact been no mysterious travels of assorted missilemen.

This wasn't plausible, Mannix had declared. The Society was limited in what it could do. Watching every nonmember's every movement was ridiculous.

"Have they reached a decision?" Wagner asked.

"Yes." No matter how level I tried to keep it, my voice seemed to shiver the bones in my head. "American personnel will be replaced by foreigners till the crisis is past. I suppose you know West Europe has a good many competent rocketeers. In civilian jobs, of course; still, they could handle a military assignment. And they'd be docile, regardless of who gave

orders. The Spanish and French especially, considering how the purges went through those countries. In short, they'd not be players in the game, just parts of the machinery."

My whetted ears heard him let out a breath. "When?"

"Not certain. A move of that kind needs study and planning beforehand. A couple, three weeks? My word is that we'd better compress our own timetable."

"Indeed. Indeed." Wagner bayoneted me with his stare. "If you are correct."

"You mean if I'm telling the truth," I said on his behalf.

"You understand, Colonel Dowling, you'll have to be quizzed and examined. And we'll meet an ironic obstacle in your conditioning against involuntary betrayal of secrets."

"Eventually you'd better go ahead and trust me...after all these years."

"I think that will be decided on the top level."

They took me to a well-equipped room somewhere and put me through the works. They were no more unkind than necessary, but extremely thorough. Never mind details of those ten or fifteen hours. The thoroughness was not quite sufficient. My immunity and my story held up. The physical checks showed nothing suspicious. Mannix had said, "I expect an inhibition too deep for consciousness will prevent the idea from occurring to them." I'd agreed. The reality was what had overrun me.

Afterward I was given a meal and — since I'd freely admitted being full of stim — some hours under a sleep inducer. It didn't prevent dreams which I still shiver to recall. But when I was allowed to wake, I felt rested and ready for action.

Whether I'd get any was an interesting question. Mannix's hope was that I'd be taken to see persons high in the outfit, from whom I might obtain information on plans and membership. But maybe I'd be sent straight home. My yarn declared that, after the bout of talks was over, I'd requested a few days' leave, hinting to my superiors that I had a girl friend out of town.

My guards, two young men now grown affable, couldn't guess what the outcome would be. We started a poker game but eventually found ourselves talking. These were full-time undergrounders. I asked what made them abandon their original identities. The first said, "Oh, I got caught strewing pamphlets and had to run. What brought me into the Society to start with was...well, one damn thing after another, like when I was a

miner and they boosted our quota too high for us to maintain safety structures and a cave-in killed a buddy of mine."

The second, more bookish, said thoughtfully, "I believe in God."

I raised my brows. "Really? Well, you're not forbidden to go to church. You might not get a good job, positively never a clearance, but —"

"That's not the point. I've heard a lot of preachers in a lot of different places. They're all wind-up toys of the state. The Social Gospel, you know — no, I guess you don't."

Wagner arrived soon afterward. His surface calm was like dacron crackling in a wind. "Word's come, Dowling," he announced. "They want to interview you, ask your opinions, your impressions, you having been our sole man on the spot."

I rose. "They?"

"The main leadership. Sotomayor himself, and his chief administrators. Here." Wagner handed me a wallet. "Your new ID card, travel permit, ration tab, the works, including a couple of family snapshots. Learn it. We leave in an hour,"

I scarcely heard the latter part. Alfredo Sotomayor! The half-legendary president of the whole Society!

I'd wondered plenty about him. Little was known. His face was a fixture on post office walls, wanted for a variety of capital crimes, armed and dangerous. The text barely hinted at his political significance. Evidently the government didn't wish to arouse curiosity. The story told me, while I was in the long process of joining, was that he'd been a firebrand in his youth, an icily brilliant organizer in middle life, and in his old age was a scholar and philosopher, at work on a proposal for establishing a "free country," whatever that meant. Interested, I'd asked for some of his writings. They were denied me. Possession was dangerous. Why risk a useful man unnecessarily?

I was to meet rebellious Lucifer, whom I would be serving yet had not the political police laid hand on me and mine.

Not that those fingers had closed on Bonnie or the kids. They would if I didn't undo my own rebelliousness. Camp La Pasionara. ...What was Sotomayor to me?

How could I believe a spig bandit had any real interest in America, except to plunder her? I had *not* been shown those writings.

"You feel well, Jim?" asked the man who believed in God. "You look kind of pale."

"Yeah, I'm okay," I mumbled. "Better sit down, though, and learn my new name."

A fake Security car, windows blanked, could bring me to an expendable hidey-hole like this, off in a lonely section of hills. The method was too showy for a meeting which included brains, heart, and maybe spinal cord of Decatur. Wagner and I would use public transportation.

We walked to the nearest depot, a few kilometers off. I'd have enjoyed the sunlight, woods, peace asparkle with bird song, if Bonnie had been my companion (and I whole, I whole). As was, neither of us spoke. At the newsstand I bought a magazine and read about official plans for my future while the train was an hour late. It lost another hour, for some unexplained reason, en route. About par for the course. Several times the coach rattled to the sonic booms of military jets. Again, nothing unusual, especially in time of crisis. The People's Republic keeps abundant warcraft.

Our destination was Oakland. We arrived at 2000, when the factories were letting out, and joined the pedestrian swarm. I don't like city dwellers. They smell sour and look grubby. Well, that's not their fault; if soap and hot water are in short supply, people crowded together will not be clean. But their grayness goes deeper than their skins — except in ethnic districts, of course, which hold more life but which you'd better visit in armed groups.

Wagner and I found a restaurant and made the conversation of two petty production managers on a business trip. I flatter myself that I gave a good performance. Concentrating on it took my mind off the food and service.

Afterward we saw a movie, an insipidity about boy on vacation volunteer meets girl on collective. When it and the political reel had been endured, meeting time was upon us. We hadn't been stopped to show our papers, and surely any plain-clothes man running a random surveillance had lost interest in us. A street car groaned us to a surprisingly swank part of town, and the house to which we walked was a big old mansion in big old grounds full of the night breath of roses.

"Isn't this too conspicuous?" I wondered.

"Ever tried being inconspicuous in a tenement?" Wagner responded. "The poor may hate the civil police, but the prospect of reward money makes them eyes and ears for the P.P."

He hesitated. "Since you could check it out later anyway," he said, "I may as well tell you we're at the home of Lorenzo Berg, commissioner of electric power for northern California. He's been one

of us since his national service days."

I barely maintained my steady pace. This fact alone would buy me back my life.

A prominent man is a watched man. Berg's task in the Society had been to build, over the years, the image of a competent bureaucrat, who had no further ambitions and therefore was no potential menace to anybody, but who amused himself by throwing little parties where skewball intellectuals would gather to discuss the theory of chess or the origin of *Australopithecus.* Most of these affairs were genuine. For the few that weren't, he had the craft to nullify the bugs in his house and later play tapes for them which had been supplied him. Of course, a mobile tapper could have registered what was actually said — he dared not screen the place — but the P.P. had more to do than make anything but spot checks on a harmless eccentric.

Thus Berg could provide a scene for occasional important Society meetings. He could temporarily shelter fugitives. He could maintain for this area that vastly underrated tool, a reference library; who'd look past the covers of his many books and microreels? Doubtless his services went further, but never into foolish flamboyancies.

I don't recall him except as a blur. He played his role that well, even that night among those men. Or was he his role? You needn't be a burning-eyed visionary to live by a cause.

A couple like that were on hand. They must have been able in their fields. But one spoke of his specialty, massive sabotage, too lovingly for me. My missiles were counterforce weapons, not botulin mists released among women and children. Another, who was a black, dwelt on Russian racism. I'm sure his citations were accurate, of how the composition of the Politburo has never since the the beginning reflected the nationalities in the Soviet Union. Yet what had that to do with us and why did his eyes dwell so broodingly on the whites in the room?

The remaining half dozen were entirely businesslike in their various ways, except Sotomayor, who gave me a courteous greeting and then sat quietly and listened. They were ordinary Americans, which is to say a mixed lot, a second black man, a Jew to judge by the nose (it flitted across my mind how our schools keep teaching that the People's Republic has abolished the prejudices of the imperialist era, which are described in detail), a Japanese-descended woman, the rest of them like me...except, again, Sotomayor, who I think was almost

pure Indio. His features were rather long and lean for that, but he had the cheekbones, the enduringly healthy brown skin, dark eyes altogether alive under straight white hair, flared nostrils and sensitive mouth. He dressed elegantly, and sat and stood as erect as a candle.

I repeated my story, was asked intelligent questions, and carried eveything off well. Maybe I was helped by Bonnie having told me a lot about theater and persuading me to take occasional bit parts. The hours ticked by. Finally, around 0100, Sotomayor stirred and said in his soft but youthful voice: "Gentlemen, I think perhaps we have done enough for the present, and it might arouse curiosity if the living room lights shone very late on a midweek night. Please think about this matter as carefully as it deserves. You will be notified as to time and place of our next meeting."

All but one being from out of town, they would sleep here. Berg led them off to their cots. Sotomayor said he would guide me. Smiling, as we started up a grand staircase the Socialist Functionalist critics would never allow to be built today, he took my arm and suggested a nightcap.

He rated not a shakedown but a suite cleared for his use.

Although a widower, Berg maintained a large household. Four grown sons pleaded the apartment shortage as a reason for living here with their families and so preventing the mansion's conversion to an ordinary tenement. They and the wives the Society had chosen for them had long since been instructed to stay completely passive, except for keeping their kids from overhearing anything, and to know nothing of Society affairs.

Given that population under this roof, plus a habit of inviting visiting colleagues to bunk with him, plus always offering overnight accommodations when parties got wet, Berg found that guests of his drew no undue notice.

All in all, I'd entered quite a nest. And the king hornet was bowing me through his door.

The room around me was softly lit, well furnished, dominated by books and a picture window. The latter overlooked a sweep of city — lanes of street lamps cut through humpbacked darknesses of buildings — and the Bay and a deeper spark-speckled shadow which was San Francisco. A nearly full moon bridged the waters with frailty. I wondered if men would ever get back yonder. The requirements of defense against the revisionists —

Why in the name of madness was I thinking about that?

Sotomayor closed the door and

went to a table whereon stood a bottle, a carafe of water, and an ice bucket which must be an heirloom. "Please be seated, Colonel Dowling," he said. "I have only this to offer you, but it is genuinely from Scotland. You need a drink, I'm sure, tense as you are."

"D-does it show that much?" Hearing the idiocy of the question, I hauled myself to full awareness. Tomorrow morning, when the group dispersed, Wagner would conduct me home and I would report to Mannix. My job was to stay alive until then.

"No surprise." He busied himself. "In fact, your conduct has been remarkable throughout. I'm grateful for more than your service, tremendous though that may turn out to be. I'm joyful to know we have a man like you. The kind is rare and precious."

I sat down and told myself over and over that he was my enemy. "You, uh, you overrate me, sir."

"No. I have been in this business too long to cherish illusions. Men are limited creatures at best. This may perhaps make their striving correspondingly more noble, but the limitations remain. When a strong, sharp tool comes to hand, we cherish it."

He handed me my drink, took a chair opposite me, and sipped at his own. I could barely meet those eyes, however gentle they seemed. Mine stung. I took a long gulp and blurted the first words that it occurred to me might stave off silence: "Why, being in the Society is such a risk, sir, would anybody join who's not, well, unusual?"

"Yes, in certain cases, through force of circumstance. We have taken in criminals — murderers, thieves — when they looked potentially useful."

After a moment of stillness, he added slowly: "In fact, revolutionaries, be they Decaturists or members of other outfits or isolated in their private angers — revolutionaries have always had motivations as various as their humanity. Some are idealists; yet let us admit that some of the ideals are nasty, like racism. Some want revenge for harm done them or theirs by officials who may have been sadistic or corrupt but often were merely incompetent or overzealous, in a system which allows the citizen no appeal. Some hope for money or power or fame under a new dispensation. Some are old-fashioned patriots who want us out of the empire. Am I right that you fall in that category, Colonel Dowling?"

"Yes," I said, you were.

Sotomayor's gaze went into me and beyond me. "One reason I want to know you better," he said, "is that I think you can be educated to a higher ideal."

I discovered, with a sort of happiness, that I was interested enough to take my mind off the fact I was drinking the liquor of a man who believed I was his friend and a man. "To your own purposes, sir?" I asked. "You know, I never have been told what you yourself are after."

"On as motley a collection as our members are, the effect of an official doctrine would be disruptive. Nor is any required. The history of Communist movements in the last century gives ample proof. I've dug into history, you realize. The franker material is hard to find, after periodic purges of the libraries. But it's difficult to eliminate a book totally. The printing press is a more powerful weapon than any gun — for us or for our masters." Sotomayor smiled and sighed. "I ramble. Getting old. Still, I have spent these last years of mine trying to understand what we are doing, in the hope we can do what is right."

"And what are your conclusions, sir?"

"Let us imagine our takeover plan succeeds," he answered. "We hold the rocket bases. Given those, I assure you there are enough members and sympathizers in the rest of the armed services and in civilian life that, while there will doubtless be some shooting, the government will topple and we will take over the nation."

The drink slopped in my hand. Sweat prickled forth on my skin and ran down my ribs.

Sotomayor nodded. "Yes, we are that far along," he said. "After many years and many human sacrifices, we are finally prepared. The war has given us the opportunity to use what we built."

Surely, I thought wildly, the P.P., military intelligence, high party officials, surely they knew something of the sort was in the wind. You can't altogether conceal a trend of such magnitude.

Evidently they did not suspect how far along it was.

Or...wait...you didn't need an enormous number of would-be rebels in the officer corps. You really only needed access to the dossiers and psychographs kept on everybody. Then in-depth studies would give you a good notion of how the different key men would react.

"Let us assume, then, a junta," Sotomayor was saying. "It cannot, must not be for more than the duration of the emergency. Civilian government must be restored and made firm. But *what* government? That is the problem I have been working on."

"And?" I responded in my daze.

"Have you ever read the original Constitution of the United States? The one drawn in Philadelphia in 1786?"

"Why...well, no. What for?"

"It may be found in scholarly works. A document so widely disseminated cannot be gotten rid of in 30 or 40 years. Though if the present system endures, I do not give the old Constitution another 50." Sotomayor leaned forward. Beneath his softness, intensity mounted. "What were you taught about it in school?"

"Oh...well, uh, let me think... Codification of the law for the bourgeoisie of the cities and the slaveowners of the South...Modified as capitalism evolved into imperialism..."

"Read it sometime." A thin finger pointed at a shelf. "Take it to bed with you. It's quite brief."

After a moment: "Its history is long, though, Colonel Dowling, and complicated, and not always pleasant — especially toward the end, when the original concept had largely been lost sight of. Yet it was the most profoundly revolutionary thing set down on paper since the New Testament."

"Huh?"

He smiled again. "Read it, I say, and compare today's version, and look up certain thinkers who are mentioned in footnotes if at all — Hobbes, Locke, Hamilton, Burke, and the rest. Then do your own thinking. That won't be easy. Some of the finest minds which ever existed spent centuries groping toward the idea — that law should be a contract the people make among each other, and that every man has absolute rights, which protect him in making his private destiny and may never be taken from him."

His smile had dissolved. I have seldom heard a bleaker tone: "Think how radical that is. Too radical, perhaps. The world found it easier to bring back overlords, compulsory belief, and neolithic god-kings."

"W-would you...revive the old government?"

"Not precisely. The country and its people are too changed from what they were. I think, however, we could bring back Jefferson's original idea. We could write a basic law which does not compromise with the state, and hope that in time the people will again understand."

He had spoken as if at a sacrament. Abruptly he shook himself, laughed a little, and raised his glass. "Well!" he said. "You didn't come here for a lecture. *A vuestra salud.*"

My hand still shook when I drank with him.

"We'd better discuss your personal plans," he suggested. "I know you've had a hatful of business lately, but none of us dare stay longer than overnight here. Where might you like to go?"

"Sir?" I didn't grasp his meaning at once. Drug or no, my brain was turning slowly under its burdens. "Why...home. Back to base. Where else?"

"Oh, no. Can't be. I said you have proved you are not a man we want to risk."

"Bu-but...if I don't go back, it's a giveaway!"

"No fears. We have experts at this sort of thing. You will be provided unquestionable reasons why your leave should be extended. A nervous collapse, maybe, plausible in view of the recent strains on you, and fakeable to fool any military medic into prescribing a rest cure. Why, your family can probably join you at some pleasant spot." Sotomayor chuckled. "Oh, you'll work hard. We want you in consultation, and between times I want to educate you. We'll try to arrange a suitable replacement at Reed. But one missile base is actually less important than the duties I have in mind for you."

I dropped my glass. The room whirled. Through a blur I saw Sotomayor jump up and bend over me, heard his voice: "What's the matter? Are you sick?"

Yes, I was. From a blow to the...the belly.

I rallied, and knew I might argue for being returned home, and knew it would be no use. Fending off his anxious hands, I got to my feet. "Exhaustion, I guess," I slurred. "Be okay in a minute. Which way's uh bathroom?"

"Here." He took my arm again.

When the door had closed on him, I stood in tiled sterility and confronted my face. But adrenalin pumped through me, and Mannix's chemicals were still there. Everything Mannix had done was still there.

If I stalled until too late...the Lomonosov Institute might or might not survive. If it did, I might or might not be admitted. If it didn't, something equivalent might or might not be built elsewhere in some latter year. I might or might not get the benefit thereof, before I was too old.

Meanwhile Bonnie — and my duty was not, not to anybody's vague dream — and I had barely a minute to decide — and it would take longer than that to change my most recent programming —

Act! yelled the chemicals.

I zipped down my pants, took my gun in my right hand, and opened the door.

Sotomayor had waited outside. At his back I saw the main room, water, moon, stars. Astonishment smashed his dignity. "Dowling, *¿ esta usted loco?* What the flaming hell —?"

Each word I spoke made me more sure, more efficient? "This is a weapon. Stand back."

Instead, he approached. I remembered he had been in single combats and remained vigorous and leathery. I aimed past him and squeezed as I had been taught. The flash of light burned a hole through carpet and floorboards at his feet. Smoke spurted from the pockmark. It smelled harsh.

Sotomayor halted, knees bent, hands cocked. Once, hunting in the piny woods of my boyhood, we'd cornered a bobcat. It had stood the way he did, teeth peeled but body crouched moveless, watching every instant for a chance to break free.

I nodded. "Yeah," I said. "A zap gun. Sorry, I've changed teams."

He didn't stir, didn't speak, until he forced me to add: "Back. To yonder phone I see. I've got a call to make." My lips twitched sideways. "I can't very well do otherwise, can I?"

"Has that thing —" he whispered, "has that thing been substituted for the original?"

"Yes," I said. "Forget your *machismo*. I've got the glands."

"Pugilist," he breathed, almost wonderingly.

Faintly through the blood-filled stiffness of me, I felt surprise. "What?"

"The ancient Romans often did the same to their pugilists," he said in monotone. "Slaves who boxed in the arenas, iron on their fists. The man kept his physical strength, you see, but his bitterness made him fight without fear or pity....Yes. Pavloy and those who used Pavlov's discoveries frequently got good reconditioning results from castration. Such a fundamental shock. This is more efficient. Yes."

Fury leaped in me. "Shut your mouth! They'll grow me back what I've lost. I love my wife."

Sotomayor shook his head. "Love is a convenient instrument for the almighty state, no?"

He had no right to look that scornful, like some aristocrat. History has dismissed them, the damned feudal oppressors; and when the men in this house were seized, and the information, his own castle would crash down.

He made a move. I leveled my weapon. His right hand simply gestured, touching brow, lips, breast, left and right shoulders. "Move!" I ordered.

He did — straight at me, shouting loud enough to wake the dead in Philadelphia.

I fired into his mouth. His head disintegrated. A cooked eyeball rolled out. But he had such speed that his corpse knocked me over.

I tore free of the embrace of those arms, spat out his blood, and leaped to lock the hall door. Knocking began a minute afterward, and the cry, "What's wrong? Let me in!"

"Everything's all right," I told the panel. "Comrade Sotomayor slipped and nearly fell. I caught him."

"Why's he silent? Let us in!"

I'd expected nothing different and was already dragging furniture in front of the door. Blows and kicks, clamor and curses waxed beyond. I scuttled to the telephone — sure, they provided this headquarters well — and punched the number Mannix had given me. An impulse would go directly to a computer which would trace the line and dispatch an emergency squad here. Five minutes?

They threw themselves at the door, thud, thud, thud. That isn't as easy as the shows pretend. It would go down before long, though. I used bed, chairs, and tables to barricade the bathroom door. I chinked my fortress with books and placed myself behind, leaving a loophole.

When they burst through, I shot and I shot and I shot. I grew hoarse from yelling. The air grew sharp with ozone and thick with cooked meat.

Two dead, several wounded, the attackers retreated. It had dawned on them that I must have summoned help and they'd better get out.

The choppers descended as they reached the street.

My rescuers of the civil police hadn't been told anything, merely given a Condition A order to raid a place. So I must be held with the other survivors to wait for higher authority. Since the matter was obviously important, this house was the jail which would preserve the most discretion.

But they had no reason to doubt my statement that I was a political agent. I'd better be confined respectfully. The captain offered me my pick of rooms and was surprised when I asked for Sotomayor's if the mess there had been cleaned up.

Among other features, it was the farthest away from everybody else, the farthest above the land.

Also, it had that bottle. I could drink if not sleep. When that didn't lift my postcombat sadness, I started thumbing through books. There was nothing else to do in the night silence.

I read: We hold these Truths to be self-evident, that all Men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty, and the Pursuit of Happiness — That to secure these Rights, Governments are instituted among Men, deriving their just Powers from the Consent of the Governed, that whenever any Form of Government becomes destructive of those Ends, it is the

Right of the People to alter or to abolish it, and to institute new Government, laying its Foundation on such Principles, and organizing its Powers in such Form, as to them shall seem most likely to effect their Safety and Happiness.

I read: We the People of the United States...secure the Blessings of Liberty to ourselves and our Posterity...

I read: Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peacefully to assemble, and to petition the Government for a redress of grievances.

I read: The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

I read: "I have sworn upon the altar of God eternal hostility toward every form of tyranny over the mind of man."

I read: "In giving freedom to the slave, we assure freedom to the free, — honourable alike in what we give and what we preserve."

I read: But they shall sit every man under his vine and under his fig tree; and none shall make them afraid....

When Mannix arrived — in person — he blamed my sobbing on sheer weariness. He may have been right.

Oh, yes, he kept his promise. My part in this affair could not be completely shielded from suspicion among what rebels escaped the roundup. A marked man, I had my best chance in transferring to the technnical branch of the political police. They reward good service.

So, after our internal crisis was over and the threat of our rockets made the Kunin faction quit, with gratifyingly little damage done the Motherland, I went to Moscow and returned whole.

Only it's no good with Bonnie, I'm no good at all.

Concerning one Harry Bernstein, who was doing quite well in the travel agency business on a purely terrestrial basis, until he learned that that part of it was only a sideline...

The Galaxy Travel Service

by LEONARD TUSHNET

Now I want you to understand, Counselor, I'm coming to you for advice. This ain't a case, and God forbid it should ever be a case! But I'm worried. I'm in the middle, you could say. I don't want to get mixed up in anything shady, and I want to do the right thing. You know me. Nobody could every say a word against Harry Bernstein, he was a crook or a finagler. I've got a good reputation, and I want to keep it.

I'll start at the beginning. I don't want to be an old man and start with the creation of the world like a lot of other old men do when all they want to tell you is how they happened to be wearing bell-bottomed slacks. But there's no other way.

You know for years I ran the Travelers Mart on Springfield Avenue here in New Falls. It was a good business. I made a nice living, I sent my children to college, I finally bought the building the agency was in. I like the travel agency business. You meet interesting people — doctors, dentists, retired people, honeymooners and second honeymooners. I took a personal interest in them, and I built up a very fine business. I never meant to retire, I enjoyed it so much. So God helped me — the state wanted to make a spur to Highway 78, and my building is taken over. *Nu*, what can you do? I got a very good price for it. I can't complain about that. Only — I'm a healthy man, even I'm sixty-eight. My father and mother (let them rest in peace!) lived to be ninety-six, so I figure I got plenty of years before me. So —

I know, I know. I'm coming to

that. I want to explain how I got to Water Street in Aurora. It's this way. It's fine being retired. Except for one thing — you've got nothing to do. How many movies can you see? How long can you sit and watch the *drek* on TV, you should excuse the expression? How often can you go to Florida? I got bored. I began to take the car and just ride every afternoon. Anywhere. Just ride.

That's how I happened to be in Aurora. I was on Water Street, and I was stopped for a traffic light, and I happened to look out of the window, and there was a travel agency with a sign in the window — Experienced Help Wanted. My heart did a flip-flop. I quick parked the car and went into the place. You see, I figured I got lots of experience, and even though the bosses were looking for a girl, I wouldn't argue about the wages if they'd overlook my age. I don't have to tell you how nobody wants to hire somebody over sixty. Fifty-five, even.

I'm coming to it, I'm coming to it. The agency is called Galaxy Travel Service. It's only a one-floor large store sandwiched between a supermarket and a stationer's. It's divided by a floor-to-ceiling partition three-quarters of the way down. I could tell in one glance that Galaxy Travel was in a bad way. Disorganized. Travel folders scattered in piles all around. Promotional material still in the same cartons they came in. Papers, papers, papers on one desk. At the other sat the manager. Some manager! A teen-ager. No sign he ever shaved. A kid, not more than seventeen at the most. He should have been in school. And that was a manager! His name was on his desk — George Washington. I told him I came in about the job and asked who did the hiring.

"I do," he answered. "I own this place."

Honestly, like the saying goes, you could have knocked me over with a fender. So I show him who I am — I still carry around a few business cards for sentiment sake — and say I'm willing to work.

That kid practically kissed me! He asks when can I start work and what my hours will be — imagine *him* asking *me* what my hours will be! — and then, the prize of all, he tells me he can pay me three hundred dollars a week and will that be enough?

"Are you crazy?" I ask him. "You can get an experienced woman for the most at a hundred and seventy-five."

"But if you're experienced and can bring some order around here so I don't knock myself out with all this," — he waved to the mess — "I wouldn't mind paying over the going rate."

"You wouldn't mind," I tell him, shaking my head, "but will the business carry that much?" I figure him for a dropout from college and his folks set him up in this business but he's got no more head for business than for the books.

"Oh, indeed! Indeed! Please, Mr. Bernstein, take the job. You won't be sorry." He winked one eye. "There might even be some extras if all goes well."

That's when I should have gotten suspicious. Extras in the travel business is a free stay for a few days on the strip in Las Vegas or a short cruise or at the most a ten-day trip to Europe. But when he said that, I knew right away he meant something else. Something dirty. I'm not young any more, but also I'm not dead. And from the tone in his voice, you wouldn't believe this but it's true, I could almost see before me naked women parading around like — like — like you read about they have in these movies the government is trying to close down. It's not a nice thing to talk about, but I just know that's what he meant.

I made believe I didn't hear those last words of his. I said I'd work for him. I figured — if it wasn't me it would be somebody else who'd be taking the job and for the kid it would be better me because I had the know-how how to keep him from drowning altogether.

So I started right the next day. Surprise Number One — Galaxy Travel Service was busy, very busy. It was right on the edge of the Polish section, and lots of Polish people are going back to the old country to look up relatives. Also off Water Street is that new project, the Frances E. Perkins Retirement Homes, for middle- and high-income tenants. They're big on trips to Hawaii and Mexico and California. Between those two and the regular pilgrimages to Rome and Israel, Galaxy had a good volume of business. No wonder the kid couldn't keep up with it. Surprise Number Two — he'd been in business, he told me, six months, and already he'd hired and fired twelve girls because they were incompetent.

That was hard to believe, him having the courage to fire anybody. He looked like such a nebbish, with his stylish long hair and soft brown eyes and clear skin and no bigger than my grandson Ronald who's in the tenth grade. But in the desk later I found the payroll deduction forms, so he wasn't telling any lies.

I was so busy straightening up the airplane flight books and the tour guides and the special package folders and making arrangements for the customers that it took me a month before I realized that some

kind of funny business was going on.

Like I told you, the store was divided by a partition in the back, and that space was divided into two. One part was our toilet and storeroom. The other was George's private office, which he always kept locked.

I noticed that he had a regular clientele of his own. Singles, no couples, teen-agers like him, all boys, no girls, and believe it or not, they all looked alike, like relatives of his. Which isn't so bad in the travel business. A lot of cousins and a wide acquaintanceship helps. When one of those customers would come in, he would go straight to George's desk, and then George would take him to his private office. They'd stay maybe half an hour, which is the average time to make reservations and so on if the person knows where he wants to go. For a while I thought he was pushing speed or pot, like you see on TV, but the boys were all nice clean-cut American types, so that couldn't be. And like the kids they were, they were already fully prepared for a trip even before they got the tickets. Boots, like they were going to do a lot of walking, and they all carried regular tourist cameras and other photographic equipment.

I noticed a couple of other funny things, besides. I'm an early riser, so I always got to the agency at eight thirty instead of nine like I'm supposed to. George was always there before me, and he always stayed after me when I left at four thirty. For a kid he seemed very ambitious. Too ambitious.

He never left the store except at noon when he'd go to the bank two blocks away and, I supposed, for lunch. I never saw him eat anything in the store. No coffee, no soda, no sandwiches, no candy. That was peculiar for one his age, too, I thought.

Another thing — on Mondays when I'd come in, he'd be sweeping out the store. It needed it. You never saw such a floor like on Monday mornings! Sand, dried mud, pebbles, colored stones. Like a kids' playground. I asked him a couple of times, "What goes on here on Sundays? You give parties for hikers?" but he only grinned and kept on sweeping.

Just be patient, Counselor. I had to give you the background so you'll understand and tell me what to do. When I told Estelle last week I was going to quit, she hollered at me, "Don't mix in what doesn't concern you! You like your work, no? You get good pay, no? So don't complain the bride is too beautiful." But I'm worried, just the same.

One day when George was at the bank, I had to open one of his

desk drawers to look for more airline ticket blanks, and I see one of these little cameras his customers always carry. Just for curiosity I take it out. It's not Japanese. It's got different fancy markings on it. I hold the viewfinder up to my eye, and there's a little button on the side I push by accident. Counselor, what I saw! I'm blushing when I think of it! It's not a camera. It's like a movie apparatus, a peep show, only the figures are very magnified. First, there are elephants, deer, bears, giraffes — a regular zoo. And then! A go-go girl without a stitch on her! In real flesh color, too. Then there's a whole chorus line of naked girls. I couldn't put the thing down I was so surprised George should have such pictures. That wasn't the worst. Comes next what the papers call live sex acts, if you know what I mean. And all this in color movies, mind you. I made up my mind to give George some fatherly advice — he shouldn't stick so close to the store and go find some girls for companions. I'm broad-minded, and I know nowadays nobody pays attention to what boys do with themselves in private, but still the real thing is better than just looking at pictures. And I'm still watching the movies, and all of a sudden they change. More animals. Not real ones. Like the ones in the Dr. Seuss books children have. I suppose they were animated puppets. And then a desert with palm trees and camels. And then like the pictures of the moon — a real desert with just rocks around. And right after that a bright green landscape with people like in divers' suits and fluorescent red and yellow bushes and flowers walking around! I'm not kidding. Walking around! Like in cartoon comics, you know, but these looked like real. That was all. I put the camera, or whatever it was, back and began to think. I didn't say anything to George when he came back.

Sunday morning I tell Estelle, "I got to go to the agency today. Tomorrow's coming a committee from the Hadassah chapter, and I want to have a whole tour laid out for them." Estelle grumbled, "In your own business you never went in on Sundays, but now you do. So go, but don't expect supper. I'm going downtown to a movie."

I drive to Water Street and park my car right across the street from Galaxy Travel Service. I make believe I'm reading the paper while I'm waiting for someone. Sure enough, I was right. About ten thirty the first one comes. A teen-ager. He knocks on the door. George lets him in. Ten minutes later another one comes, and after that until one o'clock exactly ten more come, and George lets them all in. I played a regular detective. I

made notes how they were dressed and all — blue jeans and a flowered shirt, blue jeans and a green pull-over, wine-colored slacks and a T-shirt, and so forth. I couldn't go by their faces. All those kids looked alike to me.

I couldn't see what went on inside because the shades were down. Nobody came out. I waited until two o'clock when I got too hungry to wait any more. I decide to see for myself what was what. I crossed over and knocked at the door. George opened it and was surprised to see me.

"I mislaid my good glasses," I told him. "I thought they might be here." And I walked into the store.

It was empty. Nobody was there. Nobody! Believe me when I tell you this. I acted like I was looking for my glasses in and on my desk. George helped me, but of course he couldn't find them because I hadn't lost them. "Maybe I left them in the storeroom or toilet," I say, and I go back there. The toilet is empty. So is the storeroom, and the back door is bolted, with my office jacket hanging from the knob where I left it the day before, so I knew nobody went out that way. "Maybe you picked up my glasses by mistake and took them with you into your private office," I told George.

"No. I don't think so," he says, "but I'll look anyway." He opens the door. It wasn't locked for a change. For the first time I get a glimpse of what's there. A desk and two chairs, naturally. But on the back wall is a pure white safe reaching from the floor to the ceiling with about four or five combination dials. I never saw a white safe before, like a refrigerator almost.

"That's quite a safe," I say. George smiles yes, sort of weak like, and then I got such a dizzy spell I almost fell. George helped me out and sat me down and stayed with me until I felt better. I figured I got dizzy because I skipped lunch, so as soon as I could I got up and went home. And after lunch and a long nap I thought some more.

Something mysterious is going on there, I tell myself. I'm going back. So back to Water Street I go, and again I park across the street. George is still there in the store, I could tell by the glimmer of light under the shades. I sit and wait, for what I don't know. It's monotonous. I know now why private detectives charge so much money.

About four o'clock the door of the agency opens, and a teen-ager comes out. Not one of those who went in, but I figure maybe he came after I went home. Then one after another eleven more young fellows come out about ten minutes apart. And not one of them was dressed like the ones who went in!

You can imagine how I felt. I was itching, like they say, to see what went on in that store. I walked to the pay phone on the corner and called Galaxy Travel Service. George answered the phone. I made believe I was surprised he was there. "George," I said, "I took a chance I'd find you in. Trouble on trouble. My wife broke my other glasses, and now I really need that other pair. Could I come down and look again for them?"

"Sure," he says, "and meanwhile I'll search for them myself."

I wait fifteen minutes to make it look kosher, and then I knock at the door. George lets me in. "I'm sorry to be such a nuisance," I tell him.

"That's all right, but I don't think you left your glasses here."

Only George was in the store. The toilet and storeroom was the same. But — and here's why I'm here — the floor had sand on it that crunched under your shoes, and stones and little rocks and pebbles. Unbelievable. And I couldn't make head or tail of how all that mess got there. There was even wet mud, like tracks, in a couple of places, and we didn't have rain for a week already. Also, in the air was a smell like after a thunder-and-lightning storm.

Well, I made believe I found my glasses inside the Scandinavian Air Lines book. I went back to wash my hands, and I almost fell on the way. A couple of colored stones under my foot. I kicked them, and they rolled near the toilet. Why I did it I don't know, but I picked them up and put them into my pocket. I washed and said good-night to George.

When I got home Estelle was waiting, mad. To keep her quiet I said I went for a walk and I found these two shiny stones. I said I thought they'd look nice on the mantelpiece for a decoration. Estelle looks at the stones and she gives a yell, "Where'd you find these?"

"On the street near Elmwood Park," I tell her.

"You know what you found? Come. We have to go where you found these." And since I couldn't tell her the truth, I had to go with her. She wouldn't say what or why, but we went around like a couple of fools with a pocket searchlight looking for yesterday in the gravel.

When we got home again, she says to me, very serious, "Tomorrow morning first thing you have to go to my cousin Artie's, and if he says these stones are what I think they are, you take them to the police. Somebody lost them." Her cousin Artie is a jeweler.

You guessed it. A ruby I brought home, and an emerald. Artie says he's not an expert gemologist and maybe they were

synthetic but still they're worth something. And then I had to go to the police, like Estelle said I should, and give them the same cock-and-bull story I told her. The police signed for the stones and said if nobody claimed them and they weren't stolen I could have them back after a year. I called up George and said I wouldn't be in for the rest of the week. Personal business, I said.

I just sat home and moped and got on Estelle's nerves. I told her I suspected something funny was going on at Galaxy Travel. Like I said, she said it was none of my business. "You do your work and keep your eyes and ears closed," she said. "Don't go looking a gift horse with a hatchet."

Well, I went back today, Monday. George had just finished sweeping up. I looked in the trash can and picked out a handful of gem stones — green, red, bluish, yellowish, striped. I couldn't figure it out. If George was a fence and the fellows were his gang, like in the late show last night, then why should he throw away the stones?

George was watching me. I put the stones in my pocket and asked him right out, "Why do you throw away these gems when you know they're valuable, and what goes on here on Sundays the place gets so dirty?"

George doesn't answer right away. He goes over and locks the door, pulls down the shades, and then says, "I don't want to be interrupted by customers. Sit down, Harry. I want to talk to you. I know I can trust you."

Oi veh! I think. Secrets from him I don't need to know, but just the same I'm curious. "If it's crooked, don't tell me," I say, but I sit down anyway.

"It's not crooked," he says, "only a little out of the way, so to speak." He starts to laugh. "A pretty good joke, huh?" I don't see anything funny so far, and I tell him so. He goes on, "You see, I throw these stones out in the trash because, if I used them and sold them here, I'd depress the market, and in my franchise contract it says I can't do anything to interfere with the ecology or economy. You understand that, don't you?"

"Clear as mud," I tell him, and wait for more.

"I thought I could run this operation by myself without outside help," he says. "I didn't expect to be so busy with purely terrestrial travel. It's really a galaxy travel transfer station. The tourists are from different planets..." He keeps on with a lot of mish-mash about space and stars and solar systems, only I'm not listening any more. He's a liar, I can tell, or else he's been reading too many science fiction stories, and they've turned

his head like stories did with Don Quixote. "...Sunday is the transfer day. I know the store gets filthy, but I can't help it. The tourists carry in all sorts of junk on their boots, or stuff gets caught in them, so they empty them out when they get here. I try and I try to tell them — don't litter, in this country they don't like litter, but they're always in such a hurry to move on they don't pay any attention to me."

Altogether *meshuga,* I say to myself. To him, to humor him, I say, "And where is this transfer station?"

"You've seen it," he says. "Come." He opens his office and shows me the white safe. All of a sudden he gets eager. "Would you like to take a trip? Przemo's like this Earth. So is Snafu and Golliwoff." Those weren't the names but as close as I can remember them. "But you'll have to wait until Sunday, and the latest bulletin says that seven days is the minimum with no stopovers." He scrinched up his eyes. "You know, I could even arrange a three-planet trip for the seven days on the ground you're in the travel business with me and have to know what to recommend." He looks at me like I'd jump at the chance. Meanwhile I see on his desk a star map like in the astrology section of the Sunday paper.

"I don't know, George," I tell him. "I'll have to ask my wife, Estelle. She'll probably want to go along."

He shakes his head. "Not for free. You — okay. But your wife, no. Unless you want to pay for her. I could fix it so she could go half fare on the family plan." He pulls over a desk calculator. "How old is she? How much does she weigh? How tall is she? What's the color of her eyes?" And like an idiot, I answer him. He punches the calculator and says, "That would cost you four and an eighth kilograms of rhodium, no salts. Do you think you could swing that?"

"Maybe," I say, and I tell him I'll have to go home to check our bankbooks.

Now again something that don't make sense. "If you're short," he says, "I can give you about five thousand U.S. dollars. I'd give you more, but I had extra expenses last week." Notice — he said *give,* not *lend.*

Either he's crazy or I'm hearing things, which means I'm crazy, I think. I excused myself and I came right down here.

You're smiling, Counselor. I know what you're thinking — here's an old man with his head twisted, and he comes with a grandmother fairy tale nobody in his right mind would put two cents stock in. All right. So don't believe. Just make out like what I'm telling

you make sense and give me an advice.

You're a smart man, Counselor. A lawyer knows about all sorts of crimes no decent man ever heard of. Look at my position. I'm working for a fellow who's throwing out good imitations of rubies and emeralds and topaz and other gem stones, so he can't be a crook. But maybe he's crazy and some lunatics are crooks and they can't help themselves they do nutty things. Now — should I go to the police they should find his family and have him put away? Only he's not hurting anybody I can see, and he's got a good business, so wouldn't he be better off where he is than someplace weaving rugs? Or should I just shut up and keep on working? Or should I do some more investigating on my own?

—Of course! Of course! Now why didn't I think of that? Believe me, that shows what an education can do. You're a hundred per cent right! Call his bluff. I'll say I'll take the three-planet trip. And when it turns out there's no such trip, then maybe I can reason with him he should see a psychiatrist on his own. Thanks, Counselor, thanks very much. Here's my home address. Send me a bill. You don't want a fee? I insist, I insist. I took up your time, didn't I? So then take this red stone for a souvenir. It's like the one Artie saw, and Artie said if that was polished and cut right, it would make up into a beautiful ring. Surprise your wife. I'll call you and let you know how I made out with George after the trip, ha-ha!

ISAAC ASIMOV

Science

THE FIGURE OF THE FASTEST

As you can all imagine, I frequently receive outlines of odd theories invented by some of my readers. Most of them deal with vast concepts like the basic laws underlying all of space and time. Most of them are unreadable (or over my head, if you prefer). Many of them are produced by earnest teen-agers, some by retired engineers. All appear to think I possess some special ability to weigh deep and subtle concepts, combined with the imagination not to be deterred by the wildly creative.

It is all, of course, useless. I am no judge of great, new theories. All I can do is send back the material (which sometimes extends to many pages and forces me to incur substantial expense in postage) and try to explain, humbly, that I cannot help them.

Once in a while, though; once in all too long a while, I get a letter that I find amusing. One such came years ago. It was in fourteen vituperative, increasingly incoherent pages of prose which boiled down to a diatribe against Albert Einstein, one that came under two headings:

1) Albert Einstein had gained world renown (my correspondent said) through the advancement of a great and subtle theory of relativity,

which he had stolen from some poor hard-working scientist. Einstein's victim thereupon died in obscurity and neglect without ever receiving the appreciation he deserved for this monumental discovery.

2) Albert Einstein had gained world renown (my correspondent also said) by inventing a completely false and ridiculous theory of relativity which had been foisted on the world by a conspiracy of physicists.

My correspondent argued *both* theses alternately with equal vehemence and clearly never saw that they were incompatible. Naturally, I didn't answer.

But what is there that causes some people to react so violently against the theory of relativity? Most of the people who object (usually much more rationally than my unfortunate correspondent, of course) know very little about the theory. About the only thing they know (and all that almost any non-physicist knows) is that according to the theory, nothing can go faster than light, and that offends them.

I won't go into the question of why scientists believe that nothing possessing mass can go faster than light. I handled that in several articles in the past, notably in IMPOSSIBLE, THAT'S ALL (F & SF, February 1967) and THE LUXON WALL (December 1969).

I would, however, like to talk about the actual speed limit, the speed of light, what it actually is and how that was determined. I first took up the subject in THE CLOCK IN THE SKY (December 1972) in which I discussed Olaus Roemer, the Danish astronomer who was the first to advance a reasonable figure for the speed of light through a study of the eclipses of Jupiter's satellites by Jupiter.

In that article I misjudged the accuracy with which Roemer made that measurement. I said that he estimated that it took light 16 minutes to cross the extreme width of Earth's orbit about the Sun. Actually, the figure he gave in 1676, when he announced the results of his work, was 22 minutes. At that time the total width of Earth's orbit was thought to be in the neighborhood of 174,000,000 miles, so Roemer's results implied a speed of light of 132,000 miles per second.

That is not bad. The figure is roughly 30 percent low, but it is in the right ball park and for a first effort it is quite respectable. Roemer at least determined, correctly, the first figure of the value. The speed of light is indeed between 100,000 and 200,000 miles per second.

The next measurement of the speed of light came about, quite accidentally, a half-century later.

The English astronomer James Bradley was trying to detect the parallax (that is, tiny shifts in position) of the nearer stars relative to the farther ones. This shift would result from the change in the position of the Earth as it moved around the Sun.

Ideally, every star in the heaven should move in an ellipse in the course of one year, the size and shape of that ellipse depending on the distance of the star from the Sun and its position with respect to the plane of Earth's orbit.

The farther the star, the smaller the ellipse, and for all but the nearest stars the ellipse would be too small to measure. Those farther stars could therefore be considered motionless, and the displacement of the nearer stars relative to them would be the parallax Bradley was looking for.

Bradley *did* detect displacements of stars, but they were not what would be expected if Earth's motion around the Sun were responsible. The displacements could not be caused by parallax but had to be caused by something else. In 1728, he was on a pleasure sail on the Thames River and noted that the pennant on top of the mast changed direction according to the relative motion of ship and wind and *not* according to the direction of the wind alone.

That set him to thinking — Suppose you are in a rainstorm with all the raindrops falling vertically downward because there is no wind. If you have an umbrella, you hold it directly over your head and remain dry. If you are walking, however, you will walk into some raindrops that have just cleared the umbrella if you continue to hold the umbrella directly over your head. You must angle the umbrella a little in the direction you are walking if you want to remain dry.

The faster you walk, or the slower the raindrops fall, the farther you must tilt your umbrella to avoid walking into the raindrops. The exact angle through which you must tilt your umbrella depends on the ratio of the two velocities, that of the raindrops and that of yourself.

The situation is similar in astronomy. Light is falling on the earth from some star in some direction and at some velocity. Meanwhile the Earth is moving around the Sun at another velocity. The telescope, like the umbrella, cannot be aimed directly at the star to gather the light but must tilted a little in the direction the Earth is moving. (This is called "the aberration of light.") Because light is travelling very much faster than the Earth is moving in its orbit, the velocity ratio is high and the telescope must be tilted only very slightly indeed.

The tilt can be measured and, from that, the ratio of the speed of light

to the speed of Earth in its orbit can be calculated. Since the Earth's orbital speed was known with fair accuracy, the speed of light could be calculated. Bradley calculated that that speed was such that light would cross the full width of Earth's orbit in 16 minutes 26 seconds.

If the width of Earth's orbit was 174,000,000 miles, this meant that light must travel at a rate of about 176,000 miles per second. This second try at the determination of the speed was considerably higher than Roemer's and considerably closer to the figure we now accept. It was still nearly 5 percent low, however.

The methods of Roemer and Bradley both involved astronomical observations and had the disadvantage of depending for their accuracy on knowledge concerning the distance of the Earth from the Sun. This knowledge was still not very precise even through the 19th century. (If the width of the orbit had been known as accurately in Bradley's time as it is now, his figure for the speed of light would have been within 1.6 percent of what we now consider it to be.)

Was it possible, then, to devise some method for measuring the speed of light directly by Earth-bound experiments? In that case, the shakiness of astronomical statistics would be irrelevant. But how? Measuring a velocity that seems to be not too far below 200,000 miles per second presents a delicate problem.

In 1849, a French physicist, Armand Hippolyte Louis Fizeau, devised a way to turn the trick. He placed a light source on a hill top and a mirror on another hill top five miles away. Light flashed from the source to the mirror and back, a total distance of ten miles, and it was Fizeau's intention to measure the time-lapse. Since that time-lapse was sure to be less than 1/10,000 of a second, Fizeau couldn't very well use a wrist-watch, and he didn't.

What he did do was to place a toothed disc in front of the light source. If he held the disc motionless, the light would shoot out between two adjacent teeth, reach the mirror and be reflected back between the teeth.

Suppose the disc were set to rotating. Light would travel so quickly that it would be at the mirror and back before the space between the teeth would have a chance to move out of the way. But now speed up the rate of rotation of the disc. At some speed, the light ray would flash to the mirror and back only to find that the disc had turned sufficiently to move a tooth in the way. The reflected light ray could no longer be observed.

Make the disc move still more rapidly. The light ray would then flash

outward between two teeth and be reflected back at a time when the tooth had moved past and the *next* gap was in the path of the light ray. You could see its reflection again.

If you knew how rapidly the disc rotated, you would know the fraction of a second it would take for a tooth to move in the way of the reflected ray and how long for that tooth to move out of the way of the reflected ray. You would then know how much time it took light to cover ten miles and, therefore, how far it would go in a second.

The value Fizeau settled on turned out to be about 196,000 miles per second. This was no better than Bradley's value and was still 5 percent off, but it was now too high rather than too low.

Helping Fizeau in his experiments was another French physicist, Jean Bernard Leon Foucault. Foucault eventually went on to attempt to measure the speed of light on his own, according to a slightly different type of experiment.

In Foucault's scheme, the light still flashed from a source to a mirror and then back. Foucault arranged it, however, so that on its return, the light ray fell on a second mirror, which reflected the ray on to a screen.

Suppose, now, you set the second mirror to revolving. When the light returns, it hits the second mirror after it has changed its angle just slightly and the light ray is then reflected on the screen in a slightly different place than it would if the second mirror had been motionless.

Foucault set up the experiment in such a way that he was able to measure this displacement of the light ray. From this displacement and knowing how fast the second mirror was revolving, Foucault could calculate the speed of light.

Foucault's best measurement, made in 1862, was about 185,000 miles per second. This was the most nearly accurate measurement yet made. It was only 0.7 percent low, and Foucault was the first to get the second figure correct. The speed of light was indeed somewhere between 180,000 and 190,000 miles per second.

Foucault's measurement was so delicate that he didn't even have to use particularly great distances. He didn't use adjacent hill-tops but carried out the whole thing in a laboratory with a light ray that travelled a total distance of about 66 feet.

The use of such a short distance led to something else. If light is expected to travel ten miles it is very difficult to have it travel through anything but air, or some other gas. A liquid or solid may be transparent

in short lengths, but ten miles of any liquid or solid is simply opaque. Over a distance of 66 feet, however, it is possible to make a beam of light shine through water, or through any of a variety of other transparent media.

Foucault passed light through water and found that by his method its velocity was considerably slower, only three-fourths of its velocity in air. It turned out in fact that the speed of light depended on the index of refraction of the medium it travelled through. The higher the index of refraction the lower the speed of light.

But air itself has an index of refraction, too, though a very small one. Therefore, the speed of light, as measured by Fizeau and Foucault, had to be a trifle too low no matter how perfect the measurement. In order to get the maximum speed of light one would have to measure it in a vacuum.

As it happens, the astronomical methods of Roemer and Bradley involved the passage of light through the vacuum of interplanetary and interstellar space. The light in each case also passed through the full height of the atmosphere, but that length was insignificant compared to the millions of miles of vacuum the light had crossed. However, the astronomical methods of the 18th and 19th Centuries had sources of error that utterly swamped the tiny advantage inherent in substituting vacuum for air.

The next important figure in the determination of the speed of light was the German-American physicist Albert Abraham Michelson. He began working on the problem in 1878 by using Foucault's scheme but improving the accuracy considerably. Whereas Foucault had to work with a displacement of the spot of light of only a little over 1/40 of an inch, Michelson managed to produce a displacement of some 5 inches.

In 1879, he reported the speed of light to be 186,355 miles per second.

This value is only 0.04 percent too high and was by far the most accurate yet obtained. Michelson was the first to get the third figure right, for the speed of light was indeed between 186,000 and 187,000 miles per second.

Michelson kept working, using every possible way of increasing the precision of the measurement, especially since by 1905, Einstein's theory of relativity made the speed of light seem a fundamental constant of the Universe.

In 1923, Michelson picked two mountaintops in California, two that were not five miles apart as Fizeau's had been, but 22 miles apart. He surveyed the distance between them till he had that down to the nearest

inch! He used a special eight-sided revolving mirror and by 1927 announced that the speed of light was about 186,295 miles per second. This was only 0.007 percent too high, and now he had the first four figures correct. The speed of light was indeed between 186,200 and 186,300 miles per second.

Michelson still wasn't satisfied. He wanted the speed of light *in a vacuum.* It was that speed and nothing else that was a fundamental constant of the universe.

Michelson therefore used a long tube of accurately known length and evacuated it. Within it, he set up a system that sent light back and forth in that tube till he had made it pass through ten miles of vacuum. Over and over he made his measurements and it wasn't till 1933 that the final figure was announced (two years after he had died).

The final figure was 186,271 miles per second, and that was a small further approach to the fact, for it was only 0.006 percent too low.

In the four decades since Michelson's final determination, physicists have developed a variety of new techniques and instruments which might be applied to the determination of the speed of light.

For instance, it became possible to produce light of a single wavelength by means of a laser and to measure that wavelength to a high degree of precision. It was also possible to determine the frequency of the wavelength (the number per second) with equally high precision.

If you multiply the length of one wavelength by the number of wavelengths per second, the product is the distance covered by light in one second — in other words, the speed of light.

This was done with greater and greater precision, and in October 1972 by far the most accurate measurement ever made was announced by a research team headed by Kenneth M. Evenson, working with a chain of laser beams at the National Bureau of Standards laboratories in Boulder, Colorado.

The speed they announced was 186,282.3959 miles per second.

The accuracy of the measurement is within a yard in either direction, so, since there are 1760 yards in a mile, we can say that the speed of light is somewhere between 327,857,015 and 327,857,017 yards per second.

Of course, I have been giving all the measurements in common units of miles, yards and so on. Despite all my scientific training, I still can't visualize measurements in the metric system. It's the fault of the stupid

education all American children get — but that's another story which I've dealt with before (see PRE-FIXING IT UP, F & SF, November 1962, for instance).

Still, if I don't think in the metric system instinctively, I can at least handle it mathematically, and the proper way to give the speed of light is not in miles per second or in yards per second, but in kilometers per second and in meters per second. Using the proper language, the speed of light is now set at 299,792.4562 kilometers per second. If we multiply it by 1000 (the beauty of the metric system is that so many multiplications and divisions are so simple), it is equal to 299,792,456.2 meters per second, give or take a meter.

There are few measurements we can make that are as accurate as the present value of the speed of light. One of them is the length of the year which is, in fact, known with even greater precision.

Since the number of seconds in a year is 31,556,925,9747, we can calculate the length of a light-year (the distance light will travel in one year) as 5,878,499,776,000 miles or 9,460,563,614,000 kilometers. (There's no use trying to figure out that final 000. Even now the speed of light is not accurately enough known to give the light year to closer than a thousand miles or so.)

All these figures are, of course, un-round and are troublesome to memorize exactly. This is too bad since the speed of light is so fundamental a quantity, but it is to be expected. The various units — miles, kilometers, and seconds — were all determined for reasons that had nothing to do with the speed of light, and therefore it is in the highest degree unlikely that that speed would come out even. If we even come near a round figure that is merely a highly fortunate coincidence.

In miles per second, the common value given for the speed of light in, let us say, a newspaper story, is 186,000 miles per second, which is only 0.15 percent low. This is good enough, but there are three figures that must be memorized — 186.

In kilometers per second, we have a much better situation, since if we say the speed of light is 300,000 kilometers per second, we are only 0.07 percent low. The approximation is twice as close as in the miles-per-second case, and only one figure need be remembered, the 3. (Of course, you must also remember the order of magnitude; that the speed is in the hundreds of thousands of kilometers per second and not in the tens of thousands or in the millions.)

The beauty of the metric system again displays itself. The fact that the

speed of light is about 300,000 kilometers per second means that it is about 300,000,000 meters per second and about 30,000,000,000 centimeters per second, all three figures being at the same approximation to the truth.

If we used exponential figures, we can say that the speed of light is 3×10^5 kilometers per second, or 3×10^8 meters per second or 3×10^{10} centimeters per second. You need only memorize one of these since the others are easily calculated from the one, provided you understand the metric system. The exponential figure 10^{10} is particularly easy to remember, so if you associated that with "centimeters per second" and then don't forget to multiply it by 3, you've got it made.

The fact that the speed of light is so close to a pretty round number in the metric system is, of course, a coincidence. Let's locate that coincidence.

One of the most convenient measures of distance that people use is the distance from the nose to the tip of the fingers of an arm stretched horizontally away from the body. You can imagine someone selling a length of textile or rope by stretching out successive lengths in this manner. Consequently, almost every culture has some common unit of about this length. In the Anglo-American culture, it is the "yard."

When the French Revolutionary committee was preparing a new system of measurements in the 1790's, they needed a fundamental unit of length to begin with and it was natural to choose one that would approximate the good old nose-to-fingertip length. To make it nonanthropocentric, however, they wanted to tie it to some astronomical measurement.

In the previous decades, as it happened, Frenchmen had taken the lead in two expeditions designed to make exact measurements of the curvature of the Earth in order to see if it were flattened at the poles as Isaac Newton had predicted. That placed the exact size and shape of the Earth very much in the consciousness of French intellectuals.

The Earth proved to be slightly flattened, so the circumference of the Earth passing through both poles was somewhat less than the circumference around the equator. It seemed very up to date to recognize this by tying the fundamental unit of length to one of these particularly. The polar circumference was chosen because one of these could be made to go through Paris, whereas the equatorial circumference (the one and only) certainly did not go through that city of light.

By the measurements of the time, the polar circumference was roughly equal to 44,000,000 yards, and that quadrant of the circumference from the Equator to the North Pole, passing through Paris, was about 11,000,000 yards long. It was decided to make the length of the quadrant just 10,000,000 times the fundamental unit and to define the new unit as 1/10,000,000 of that quadrant and give it the name of "meter."

This definition of the meter was romantic, but foolish, for it implied that the polar circumference was known with great precision which, of course, it was not. As better measurements of the Earth's vital statistics were made, it turned out that the quadrant was very slightly longer than had been thought. The length of the meter could not be adjusted to suit; too many measurements had already been made with it; and the quadrant is now known to be *not* 10,000,000 meters long as it ought to be by French logic, but 10,002,288.3 meters long.

Of course, the meter is no longer tied to the Earth. It was eventually defined as the distance between two marks on a platinum-iridium rod kept with great care in a vault at constant temperature and finally as so many wavelengths of a particular ray of light (the orange-red light emitted by the noble gas isotope, krypton-86, to be exact).

Now for the coincidences:

1) It so happens that the speed of light is very close to 648,000 times as great as the speed of the Earth's surface at the equator as our planet rotates on its axis. This is just a coincidence, for the Earth could be rotating at any velocity and was in the past rotating considerably faster and will in the future be rotating considerably slower.

2) A single rotation of the Earth is defined as a day, and our short units of time are based on exact divisions of the day. Thanks to the Babylonians and their predecessors, we use the factors 24 and 60 in dividing the day into smaller units, and by coincidence 24 and 60 are also factors of 648,000. As a result of coincidences 1 and 2 , anything moving at the speed of light will make a complete circle at Earth's equator almost exactly 450 times per minute or almost exactly 7.5 times per second — which are simple numbers.

3) Since by a third coincidence, the French commissioners decided to tie the meter to the circumference of the Earth and make it an even fraction of that circumference, the result is an inevitable near-round number for the speed of light in the metric system. There are 40,000,000 meters (roughly) to Earth's circumference and if you multiply this by 7.5 you come out with 300,000,000 meters per second.

Can we do better: Can we just have an exponential figure without having to multiply it? Can we express the speed as a certain number of units of length per unit of time with a number that consists of a 1 followed by a number of zeroes and come fairly close to the truth?

If we multiply 3 by 36 we come out with a product of 108. If we remember that there are 3600 seconds in the hour, it follows that the speed of light is 1,099,252,842 kilometers per hour. This is just about 1 percent over the figure of 1,000,000,000 kilometers per hour. If we were to say that the speed of light is 10^9 kilometers per hour, we'd be only 1 percent low of the facts, and that's not bad at all.

As for the light-year, we can say it is 6,000,000,000,000 (six trillion) miles and be only 2 percent high. To express that exponentially, however, we must say 6 X 10^{12} miles and that multiplication by 6 is a nuisance. In the metric system we can say that a light-year is 10 trillion kilometers or 10^{13} kilometers and be only 5 percent high. The slightly lesser accuracy might be more than counterbalanced by the elegance of the simple figure 10^{13}.

However, honesty compels me to say that the despised common measurements happen to offer a closer way of approaching the light-year in a purely exponential way. If we say the light-year is equal to 10^{16} yards, we are only 3.5 percent high.

Barry Malzberg's latest is a piece that can be added to the small body of science fiction stories about chess, and it is one that finally puts the Game in perspective, i.e., the opponents are playing for the fate of the universe. What else?

Closed Sicilian

by BARRY N. MALZBERG

1. P-K4

He *would* open with his standard King's Pawn, looking to transpose into the Ruy Lopez at the earliest opportunity, and I have known this in dreams as in study for most of my life, yet I cannot transcend the thrill of mingled terror and anticipation with which, nevertheless, I react to his first move. Sitting across from me in perfect repose, his suddenly alien eyebrows curl into the faintest and most tremulous posture of inquiry as his eyes flick beyond me and with studied disinterest to the audience of nine hundred million around and below us. Due to the high ethics of the match and the scrupulous efforts which I have conducted throughout to force the spectators to conform to the code of play, they do not react to his gaze, nor do they murmur. Seated with my back to them, facing the bleak panels of this high-walled room in which we play, I am able to bring my utmost concentration to the board and thus my line of sight descends and my opponent, at this moment, no longer exists.

We are playing for the fate of the Universe. Previously we have played for the fate of the world, the worlds, the Solar System, the Milky Way, the Galaxy and the known Cosmos, but due to an apparent series of close defeats I have suffered due to the clever manipulations of the Overlords, the stakes have been progressively raised from one match to the next, and from this final confrontation there can be no appeal. I am not concerned. My game is in perfect order; I have spent eight months with my miniature chessboard and the Blue

Book of my opponent's games preparing myself for this last great test. Several times I have forced postponents due to feigned illness or displeasure with the match conditions in order that I might have every opportunity to bring my studies to fruition. Pausing only for food and sleep, a couple of errant comminglings with terrestrial females which I have had sent to my quarters, I have dedicated myself utterly to the comprehension of my opponent's weaknesses and the development of strategic lines of attack which involve much original thought. I cannot fail the Universe in this last and most conclusive of all our tests, and now I know that essential control has passed into me. I feel small surges of power radiating through my bearded and distinguished frame; I feel a little tremor of my opponent's weakness intersect my own synapses and pass through them quickly. He has been greedy and should have cashed in on the Galaxy. But now he will pay by losing all.

I sit in perfect serenity, and when I have used up the time I have allotted myself on the clock, I make my response:

1. P-K4

Originally, my opponent and I did not seem fated for such great and meaningful confrontation, We were born within months of one another, spent our early years being raised in the same complex, discovered chess together and passed many pleasant years solving the mysteries of the game. As youths, we did not otherwise neglect more routine pastimes; we went out with the same girls, progressed with them sexually at about the same rate, shared classes and areas of subject interest — chemistry and textiles, as I recall, although it is hard to remember this far back; since I became involved in this, my early life has become so dim — and in fact became chess professionals on the same day, meeting all of the qualifications of the League and receiving our initial assignments. Only then in fact did our paths diverge; my opponent went to Brooklyn to become a promising newcomer on a team which needed shoring up badly, whereas I went to Bismarck North Dakota, Ganymede, where I led the team in my first season to a tie for third place in the satellite division. Who was to have known when we were innocent lads growing up together in the towers that it would be he because of his fatal weakness to fall into the hands of the malevolent X'Thi, scourge and enemy of all humanity, whereas I, no xenophobe but loyal to my heritage from the beginning, would become the last bulwark of defense against occupation of the

Universe by these terrible aliens? Who would have known?...but as my opponent himself said in one of the authorized interviews before the match (I have cooperated in these myself to build up the gate), *the ways of life are strange* and so they are and so are we all and now I have succeeded in blockading the King's Pawn and cramping his position as early as his second move. What now, then? I look at him with a careful, triumphant smile and stand, take myself hurriedly backstage where refreshing snacks and fruit juices are available to us at all times by the courtesy of the Earth Federation and the X'Thi Congress, one of the few areas in which these deadly enemies have shown cooperation. Soon enough, there will be no need for further concessions:

2. Q-B3

When I return, having had a cruller and a small nourishing handful of Jovian lice, the aspect of the stage has subtly altered; the lighting has changed; my opponent is leaning backwards, hands on knees, with a contented expression on his face; and small darting tadpoles of light draw me irresistibly to fixate upon the board. He has pushed his Queen peremptorily, a characteristic which he has evinced in several previous games, but it is one of those critical weaknesses upon which I have concentrated in my studies, and I am prepared now to punish him terribly for it.

My opponent has always had this tendency to develop his major pieces too rapidly. On Nulla, in the Solar Championships of 2256, who can forget that famous game in which he prematurely wedged open his Rook file with an unsound sacrifice and then, doubling his Rooks through additional sacrifices on the twelfth move, proceeded to dismember the hapless Wojewscking in the finals? Yet all along, as the Blue Book reveals, Wojewscking could have averted the disaster through playing his Queen's Bishop to the seventh rank (now undefended because of the sacrifices) and castling? Well, there is no way of explaining such things; Wojewscking was playing in the uncongenial gravity of Uranus, whereas my opponent had prepared himself for the Championship by residing on that unhappy planet for three Earth weeks prior to the opening. It does not matter; Wojewscking's disaster only made my opponent more attractive to the vicious and malevolent X'Thi when they came into known space in 2271 and sought a proper turncoat who would help them to enact their dreadful schemes. Under the illusion that they had possession of the best chess player in the

Federation, they allowed my opponent to play for progressively higher stakes, and now they will lose the Universe.

Looking at him in the strange lighting, I see that he is both smaller and older than I remembered him to be, and I feel a flare of pity instantly canceled by cold resolve. I am a man of some personal limitations and minor neurotic traits, but when I play chess, as it has been noted, I become steel, and there will be no remorse for my opponent, that traitor now, simply because he is aging and destroyed by pressure:

2. QN-QB3

The aim is to develop my minor pieces quickly while he falls into the lure of launching an early, unsound attack. "Just imagine," I remember saying to him in the projects of our youth, oh, so many years ago when we were playing yet another of our casual games, "what would it be like if we could play chess for the fate of the Universe? Wouldn't it make more sense than fighting wars or things? We could be the two best players in the world and countries could choose up sides and that way one game or a series could settle everything."

"But if we were playing for the fate of the Universe, it would be more than just the world and countries and people then, wouldn't it?" my opponent said, demonstrating even then, at the age of twelve or thirteen, that treacherous cunning with which, years later, he would leap into the hands of the ugly and tormenting X'Thi when they offered to resolve all differences by playing off the worlds. "But of course I don't think chess could ever be that important," he added, pushing his Knight's Pawn to the seventh rank and forcing a checkmate which I could have easily avoided if I had not felt pity for his youth, his abandonment, his unhappy upbringing in the Projects and had wanted to give him a gift in the form of a small crushing defeat.

It is a long way from that to this, but I am entrapped by no such feelings of pity or mystery today. Let it be said and be done: I deliberately threw the matches for the world, the worlds, the Solar System, the Milky Way, the known Galaxy in order to force this final confrontation. I knew that, spurred on by their greed and thoughts of an easy victory, the X'Thi would accept our proposals for continued games, upping the stakes, and I have been merely waiting for this great opportunity to toy with them and crush them:

3. B-B4

Continuing his unsound attack by posting the King's Bishop at an

unsafe square. The normal continuation in the Ruy Lopez would be *B-B5*, but he has a weakness for variations of this sort and now will pay for them dearly.

The X'Thi are corrupt, deadly, vicious and evil, and are prefigured in detail by *The Revelations of St. John the Divine* which talk about that great Snake which in the last days will appear to battle Mankind at Apocalypse. Actually the X'Thi do not look like snakes; they are in fact rather pleasantly humanoid in appearance, but no matter of that; the tempter and the Final War would have to come in the guise of the familiar. (Note the Book of Job.) I have a minor interest in Bible lore which is one of my few areas of relaxation outside of my life-long dedication to the art and lore of Caissa. Clearly what my opponent and I are now contending is the last and great battle between the forces of light and darkness which will usher in the divine era of the Second Coming, but this enormous obligation does not cause me to tighten with pressure (I feed upon it) but instead makes me relaxed and easeful. Not only are my skills superior to his despite the apparent record of successive defeats, my cause is essentially righteous, whereas his, of course, is that of Satan. It is always unwise to open a Queen prematurely when fighting for the cause of Satan.

The murmurs of the spectators, evenly divided by fiat between humanity and X'Thi, the combined political leaders of all the separate worlds, that is, admitted by invitation only, rise slightly and billow toward me, as I prepare my first and devastating combination:

3. QN-R4

Threatening the Bishop and unleashing a devastating attack upon the Queen side. My opponent seems to pale and puts a hand indelicately to his mouth as he leans forward, the implications of the move and his terrible error with the Bishop already clear to him. For an instant, just an instant, I want to reach across the board and take his hand, take it as I might have in the old days and say, "Listen, it's all right, don't be unhappy, don't take it personally, it really doesn't matter that much at all, and it's no reflection on you as a person if you lose a game of chess," but this would be preposterous since everything depends upon this game of chess, and if he loses (as now he must), the X'Thi would surely draw and quarter him before winking out of our Universe forever. "It's pointless, it has nothing to do with the situation, relax, take comfort," I want to say to him, but this is surely insane since the situation is climactic and irrevocable.

What has happened to me simply enough is that I am being assaulted by feelings of sentiment on the precipice of my immortal victory. I would not put it beyond the cunning and tormenting X'Thi to have contrived this themselves by manipulation of certain devices within the chair, the hall, the lighting, which can change my brain waves and interfere with normal psychic functioning. It was for this reason that I insisted that security in the hall be so tight and that the fruit juices and snacks be prepared and tasted by my own staff before their emplacement backstage, but I always knew that, given the final test, my will would be stronger than theirs and that none of their terrible devices could affect me.

They do not affect me now. I lean back in my chair, feeling a slight, cramping pressure within the bowels diminish, feeling all sentiment depart, and look out toward the audience for the first time; blue haze in the darkness, wisps of smoke, the soft purring of the atmospheric reservoirs which maintain the segregated sections of the hall at the proper balance for the two races. "Well," I say to him then turning back, his face like an egg caught between two lights, his features crazed and crayoned, weaving insubstantially against that bleak shell, "what are you going to do now, eh? What are you going to do now you traitorous son of a bitch?" and then I take from my inside pocket one of the foul cigars I have brought for just this occasion and extracting matches light it deliberately in front of him, pouring out smoke, extinguishing the match, making him gasp as plumes of grey waft toward the great dome. Lasker was famous for tactics of this sort in 1924, but it is not 1924; it is more than three centuries later and here I am yet and now humanity, the seed of Abraham, will overtake the Universe and I am glad, glad, for I know my name will be legion.

"My friend," my opponent gasps, "my old friend, this is too terrible," and incredibly, leaves his chair to reach toward me in a mad embrace, and I dodge it only at the last instant (I abhor physical contact of any sort now) and with a shudder, revolve my chair, leap out of it. "My old friend," he says again, "this cannot be," but he subsides; the features seemed washed and muddled by some fluid; he returns to his chair and ponders the board silently, chin in his hand.

Suddenly it is all too much for me — the signals must have become displaced, and it is he, not I, who is undone by sentiment — and I hurry backstage again, seeking the soothing fruit juices

and the knowledge that when I return he will have made the evasive move with the Bishop, losing a full tempo, to demonstrate his irrevocable loss:

4. QxP Mate

When I do return I see him before I see the board, and he is weeping. For a moment I want to embrace him then, if only in a kind of comfort, but the years of discipline and denial are too ingrained, the task too enormous, to allow me such failure, and so I take my chair and look at the board then to consider the best way in which I can continue to crush him.

Fantasy and Science Fiction

MARKET PLACE

BOOKS-MAGAZINES

SCIENTIFANTASY specialist: Books, magazines. Free catalog. Gerry de la Ree, 7 Cedarwood, Saddle River, N.J. 07458.

SPECIALISTS: Science Fiction, Fantasy, Weird Fiction. Books, Pocketbooks. Lists issued. Stephen's Book Service, Post Office Box 321, Kings Park, L.I., New York 11754.

FANTASY-SF books, detective fiction, Sherlockiana. Mostly hardcover first editions. Free catalogs. Aspen Bookhouse, RD 1, Freeville, N.Y. 13068.

Send for Free catalog of hardcover science fiction and fantasy books and pulps. Canford Book Corral, Box 216, Freeville, N.Y. 13068.

FREE CATALOGS SF/FANTASY 100's of titles listed from rarities to reading copies. MIDLAND BOOK SERVICE, 22 S. Fullerton Ave., Montclair, N.J. 07042.

Any out of print book located. No obligation. Write William B. Spinelli, 32 Elmwood, Crafton, Pa. 15205.

BUYING: Single items or collections. Weird Tales, Unknown, Astounding, etc. Arkham House, SF Hardcovers. Midnight Book Company, 1547 East 21st Street, Brooklyn, N.Y. 11210.

TIME TRANSPORT A REALITY. "found on the elevator, 205 W. 57th St.", a recording from the distant future — high quality 33 rpm ten-inch disc. $3.00 to The Record, Box 3011, New York, N.Y. 10008.

Frankenstein Interview. "Monster" Tells All. $1.50. Norris, Postbox 44377-K, Indianapolis, 46244.

SF-Fantasy magazines, books, paperbacks. List free. Collections also purchased. Robert Madle. 4406 Bester Drive, Rockville, Md. 20853.

RARE SF, Fantasy, Horror, Mysteries. Mail order only. Free catalogs. Haunted Bookshop, 18 Keller Street, Valley Stream, N.Y. 11580.

Fantasy, Horror, Lovecraft, Howard, Books, Magazines, fanzines. Lists free. Weinberg, 10533 Kenneth, Oak Lawn, IIL 60453.

Free catalog underground comix. Scifi/horror/fantasy. Superbly illustrated versions of Farmer, Ellison stories. Subscriptions for individuals. Rates, credit for stores. Sales representatives needed in all areas for our products. Direct from the publisher at: LAST GASP, Box FSF, 1274 Folsom, SF, Cal 94103.

Poems by Thomas M. Disch: The Right Way to Figure Plumbing. First 200 signed and numbered. $2.10 postage included. The Basilisk Press, P.O. Box 71, Fredonia, N.Y. 14063.

FANTASY AND TERROR brings you new stories in the tradition of Howard, Dunsany, Bloch, Tolkien and their kin. Sample issue half price: 50 cents. See what you think. Box 89517, Zenith, Wa. 98188.

BOOK & MAGAZINE READERS! Send wants to: S&S Books, FS-8, 80 North Wilder, St. Paul, Minn. 55104.

For sale: Science fiction, westerns, others. Wanted: Doc Savage, Shadow, others. We buy collections. Send list, enclosing stamp. Magazine Center, Box 214, Little Rock, Ark. 72203.

100 page catalog. Arkham, Fantasy, Burroughs, Mirage Press, Science Fiction Pulp, paperbacks, comics. Send $.75. We also buy SF and comic collections. Send lists. Passaic Book Center, 594 Main Ave., Passaic, N.J. 07055.

Do you have something to advertise to sf readers? Books, magazines, typewriters, telescopes, computers, space-drives, or misc. Use the F&SF Market Place at these low, low rates: $3.00 for minimum of ten (10) words, plus 30 cents for each additional word. Send copy and remittance to: Adv. Dept., Fantasy and Science Fiction, P.O. Box 56, Cornwall, Conn. 06753.

SCIENCE FICTION, MYSTERIES (new hardcover) Save to 70%. Free catalog. Spencer, 3016-D South Halladay, Santa Ana, Calif. 92705.

AUTHOR-SERVICES

AUTHORS! We offer a professional publishing service to writers who want to see their manuscript in print. Free Booklet: Department BB, Pageant-Poseidon Ltd., 644 Pacific Street, Brooklyn, N.Y. 11217.

EDUCATION

Logic Newsletter, theory, design, construction, learn boolean algebra, computers, robots, sample copy $1.00. Logic Newsletter, POB 252, Waldwick, N.J. 07463.

EARN COLLEGE DEGREES at home. Many subjects. Florida State Christian University, P.O. Box 1674, Fort Lauderdale, Florida 33302.

EXTENSION STUDY degree progrxms. All subjects. Accredited. Department of Education, 209 Kitchen Building, Ashland, Kentucky 41101.

INSTRUCTION

MAKING THE INTERNATIONAL SCENE? Speak Esperanto, Millions do. For contacts, books, periodicals, courses, travel, send $.25 to ESPERANTO, Box 508, Burlingame, Ca. 94010.

HYPNOTISM

LEARN WHILE ASLEEP. Hypnotize with your recorder, phonograph. Astonishing details, sensational catalog free. Sleep-learning Research Association, Box 24-FS, Olympia, Washington 98502.

Hypnotism Revealed. Free Illustrated Details. Powers, 12015 Sherman Road, North Hollywood, California 91605.

FREE Hypnotism, Self-Hypnosis, Sleep learning Catalog! Drawer G-400, Ruidoso, New Mexico 88345.

MONEY MAKING OPPORTUNITIES

MAKE $1.00 PER SALE selling engraved metal Social Security plates. FREE SALES KIT. Engravaplates, Box 10460-311, Jacksonville, Fla. 32207.

MISCELLANEOUS

ANTIGRAVITY DEVICE. Brochure rushed free. AGD, Box 3062 xx, Bartlesville, Oklahoma 74003.

NOW, ARTIFICIAL LIFE from our Lab into your very hands! WACKYSACK will absolutely blow your mind. Recently patented, totally new scientific principle. A handful of dilatant fluid hermetically sealed in an elastomeric membrane, it feels and acts alive. It slithers, creeps, oozes, writhes and shrinks like a giant amoeba. $2 ppd to: Rosenberg, Psychorheology Lab, 23 N. Chelsea Ave., Atlantic City, N.J. 08401.

ESP LABORATORY. This new research service group can help you. For FREE information write: Al G. Manning, ESP Laboratory, 7559 Santa Monica Blvd., Los Angeles, Calif. 90046.

Noted ESP Specialist has given many accurate predictions on radio and TV. Has helped many people with personal problems. Three questions for $10.00 or 7 for $20.00. By mail Milton Kramer, 9100 N. Cumberland Ave., Niles, Illinois 60648, Phone (312) 298-4588.

MEERSCHAUM PIPES! Exceptional values. Catalog. PMP, P.O. Box 444, Gaithersburg, Md. 20760.

POSTAL CHESS CLUB. Ratings given. Write Chessology, Box 6221, Burbank, California 91510.

Nature tours to Rain Forest, Paramo, Savanna, Cloud Forest. From Miami, week. $495. Guided to orchids, birds, morphos. John Beckner, 736 Myrtle Way, So., St. Petersburg, Fla. 33705.

PERSONAL

CHINESE FIRECRACKER LABELS! Lovely, genuine 8x6" multicolor prints on rice paper. Unique stationery, super framed or matted. Six assorted for a mere $1. Rothman's, 1439F Sawmill Road, Downington, Penna. 19335.

WITCHCRAFT, VOODO HEAD-QUARTERS. Spells Galore! Occult Correspondence Club. Catalog $.25 Cauldron, Box 403-FSF, Rego Park, N.Y. 11374.

Unique, enchanting witchcraft items. Details $.10. The Tower, Box 1165, Mt. Vernon, Ill. 62864.

Burglar-proof your home. Send $1. Security Research Data, Box 218, Berea, Ohio 44017.

OCCULT

Occult Directory the only one of its kind listing the sources of spiritual, occult, and religious merchandise, wholesale and retail. This mailorder bonanza of information is a bargain at $1.00 postpaid. Haskell, Box 49495, Studio E, Los Angeles, Calif. 90049.

Christmas Gift Rates

$8.50 for one one-year subscription
(Your own, new or renewal, or first gift)
$15.00 for two subscriptions
$6.50 each additional subscription

ORDER NOW — PAY IN JANUARY, THIS OFFER EXPIRES JANUARY 15, 1974. Add 50c per year for Canada and Mexico; $1.00 per year for other foreign countries.

Send FANTASY AND SCIENCE FICTION as a Christmas gift to:

Name .....

Address .....

City .....State .....Zip .....

Name .....

Address .....

City .....State .....Zip .....

FROM .....

Address .....

City .....State .....Zip .....

ENTER my own subscription ☐ new ☐ renewal
Check one: ☐ I enclose $____/☐ Bill me after Christmas

Please send me a gift card for each person on my list — to be personalized with my own signature and mailed from my house.

MERCURY PRESS, P.O. Box 56, Cornwall, Conn. 06753