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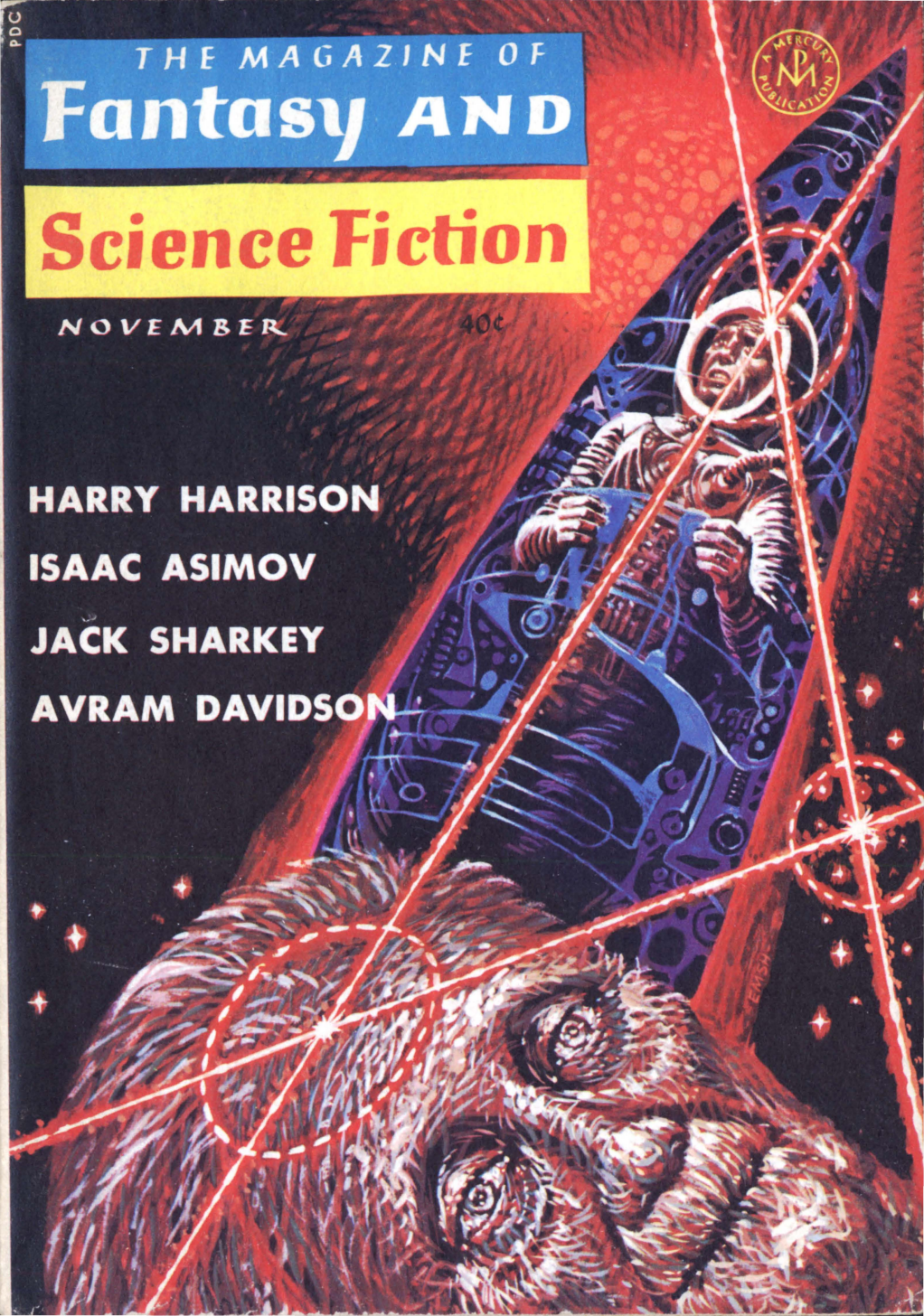

Fantasy and Science Fiction

NOVEMBER *Including Venture Science Fiction*

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AN OPEN LETTER

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Drugs which stimulate the senses . . . drugs which free the mind from the bounds of time and ordinary time-bound metabolism . . . pyschological techniques which bind the mind, finding its weak spots and hitting both hard and painlessly . . . Some of these are already facts, others may soon be facts. Few writers are so aware of the political possibilities inherent in them, and the dangers inherent in the possibilities, as is Tom Purdom. Stroll with him now through Greenplace, A Nice Place To Live, and see for yourself.

GREENPLACE

by Tom Purdom

On the outskirts of Greenplace, Nicholson seated himself in the wheelchair and took the drug injector out of his shirt pocket. Rolling up his sleeve, he uncovered the lower half of his biceps. For a moment the injector trembled above his flesh.

He put the injector down. Twisting around in the chair, he looked up at the sec standing behind him.

"Will you help me if I get into a fight?"

"I don't get paid to fight," the sec said.

"I thought you might do it for pleasure."

"I work for money."

Fear was a tingling nausea in his chest and stomach. A yes answer from a big, hulking man like the sec would have made him feel a lot better. From the look of him, he had thought the sec might enjoy a fight. The big man's face seemed to be set in a scowl of permanent disgust with a world which made such trivial use of muscles. Ever since the invention of the voicetyper, which had made the old trade of stenographer-typist obsolete, secs had been the lowest class of unskilled labor, status symbols hired on a temporary basis merely to carry their employer's files and dictating equipment. He turned around in the chair. Across the street the late afternoon sun fell on the lawns and houses of Greenplace. Children were yelling and he could smell the grass.

What was pain like? He couldn't remember. He had been forced to endure it only once in his life, twenty-four years ago when he had been twelve and the doctors had given his left eye a new set of muscles. Could he take it? Would he beg them for mercy?

"Don't think they don't know you made that last survey," Bob Dazella had told him. "Never underestimate the Boyd organization. Every time a lawn gets mowed in that district, it goes in their computer. You'd better go armed. Believe me, you go into Greenplace unarmed and you may come out a cripple."

Glued to the middle finger of his left hand was a scrambler, a finger length tube which fired a tight beam of light and sound in a pattern designed to disrupt the human nervous system. In his lower left shirt pocket he had a pair of bombs loaded with psycho-active gas and in the bottom of the wheel chair he had installed a scent generator and a sound generator. He didn't know what the two generators could do for him if he got into trouble, but they had been the only other portable weapons he could think of. He didn't think anything could help him very much. MST—melasynchrotrinad—had one bad side effect. It disrupted coordination. Once the drug hit his nervous system he would be a helpless lump of flesh for the next four hours.

Again the injector trembled above his biceps. He shook his head disgustedly. He pressed the release and two cc's of red liquid shot into his arm. Behind him the sec stiffened. He put the injector back in his pocket.

It was a beautiful Saturday afternoon in late summer. He was sitting in the shade of a tall apartment tower, the last one for several miles. In front of him Greenplace looked comfortable and pleasant. Lawn mowers hummed across the grass while their owners watched them with sleepy eyes. On every lawn there was at least one person sprawling in the sun. Greenplace had been built in the early 1970's and it was typical of its period. Every block had fewer than fifteen houses and every house had a lawn and a back yard.

He sat tensely in the chair. He could feel the chemistry of his fear mingling with the disturbing chemistry of the drug. He felt like a pygmy with a wooden harpoon waiting to go out and do battle with one of the giant creatures that swam in the oceans of Jupiter. Congressman Martin Boyd was probably the most powerful man in the United States. He had been the undisputed boss of the Eighth Congressional District since 1952. Now that medical science had conquered death, or had at least given most people an indefinite life span, his organization might very well control the district forever. In

addition to his forty-eight years seniority, Boyd had accumulated wealth, a first-rate psych staff, and control of the House Rules Committee and the Sub-Committee on Culture and Recreation. Modern psych techniques were so powerful politicians and social scientists unanimously considered Boyd unbeatable.

His head rolled to one side. He scanned the clouds and the blue sky and he estimated the wind velocity and what kind of weather they were having in Nigeria, where his wife was on a weekend shopping trip. His hand suddenly appeared between his eyes and the clouds. He tried to return it to the arm of the chair and instead slapped the bare skin below his shorts hard enough to sting.

He tried to lower his head and look at Greenplace. He found himself looking at the apartment tower on his right. He noted the number of floors and the number of windows per floor and developed a highly original theory about the effects of high rise apartment living, combined with current toilet training procedures, on the Oedipus complex of classic Freudian psychology. Before he could take his eyes off the tower, his drug accelerated brain composed a witty paragraph about the theory for his popular column in *Current Psychology*.

"Let's . . . g..g..ooo.." His tongue and lips felt normal but his ears told him his coordination was already degenerating.

The sec pushed him forward. His head was swaying from side to side. He tried holding it steady and failed. The landscape swung across his vision.

MST was the most powerful psychic energizer on the market. It multiplied the powers of observation and the rate and quality of thought by a factor somewhere between three and seven. The user observed data he would never have observed in his normal condition, and his mind invented and discarded hypotheses at a dizzying rate. The drug was only eight years old but it had already been responsible for several breakthroughs in the sciences. Thanks to four brilliant insights by drugged experimenters, his own field of psychotherapy had leapfrogged several decades. The black arts of social manipulation had also advanced.

He heard the wheels of the chair rumble on the street and he calculated how much heat they were generating and formulated two contradictory hypotheses about what the motion of all the wheeled vehicles on Earth was doing to the annual temperature and rainfall of the northeastern United States. Smoothly, without breaking his stride, the sec rolled him off the street onto the sidewalk.

On the first lawn two boys mounted on electric rhinos were engaging in a duel with stunner

swords. A heavy man in dirty shorts and an unbuttoned shirt looked away from the combat and glanced at the wheelchair and its occupant. His eyes narrowed. His face hardened and he stuck a cigar butt in his mouth, and then Nicholson's head rolled again and he saw the people watching him from the other side of the street. Several people had actually gotten out of their lounging chairs and stood up. All the way down the block, every eye over twelve years old was looking at him.

He had seen the same kind of hostile looks last month when he had surveyed a neighborhood near here on a weekday morning. Fear of strangers and mind probers seemed to be part of the conditioning the Boyd organization imposed on the District. A big organization didn't have to psych the voters by riding around openly drugged. Boyd's psychers could use more subtle methods: surveyors disguised as salesmen and maintenance men; community carnivals at which the booths and amusements were concealed psych tests; even, when necessary, arresting people and releasing them with many apologies and no memory they had been psyched during their detention.

Nicholson's organization consisted of five men and at present he was the only trained psych man in the group. An MST survey was the only way a small organization could learn enough about the voters to fight a strong campaign.

Turbine engines whined in his ear. "Cop," the sec grunted.

An open police car swung past his bobbing eyes. In the front seat two policemen and a panting dog stared at him.

The policemen slid out of his vision. For a moment he and the fat man with the cigar eyed each other. The boys had stopped jousting and the man was standing, with his legs spread and his arms folded in his chest, in front of the exact center of his house. There was a comic resemblance between the human figure and the front of the house. Both were extremely broad for their height. The fat man had a fat house . . .

"Just a minute, mister. Hold on."

Fear erased everything but the policemen from his nervous system. Their exact appearance flashed into his consciousness and he formulated three hypothetical models of their personality structure. His right hand shot toward the sky and then dropped over the arm of the chair. He moved it again and this time it landed on the arm. Underneath his fingers he could feel the reassuring plastic of the buttons which controlled the generators.

"Sss . . . ttt . . . oooopp . . ."

The sec stopped. The cops got out of the car, one of them holding the dog on a u-shaped leash,

and stepped in front of him. The one without the dog held out his hand.

"May I see your identification, please?"

"You making an arrest?" the sec asked.

"Just a routine check."

"We don't have to."

"Don't have to what?" the cop with the dog said.

"You have to arrest us for something. No arrest, no ID."

Nicholson wondered where the sec had learned that bit of law. The big man might not be bright enough to hold a regular job in a modern economy, but he seemed to have learned a few things about dealing with cops. He was certain the Boyd organization already knew who he was and most of his life history, but when you were fighting modern psych techniques you never knew what piece of information might be crucial. The best rule was to tell them as little as you could.

"What are you doing here? Who are you working for?"

The sec didn't answer. The grinning dog bobbed across Nicholson's vision and he felt a new stab of fear. The thick muscle in his mouth quivered.

"Aaaag . . . verrr . . . ggg . . ."

The cop scowled at the sec. "I asked you a question."

The sec remained silent. A bony hand jerked the leash. The dog growled.

"You want us to run you in for disturbing the peace?"

"We aren't making noise. You have to make a noise."

"You're a real lawyer, aren't you?"

The buttons controlling the generators were still under his fingers. In his condition it would be hard to punch out a particular code, but he could surprise them with a blast of almost anything, from the roar of a rocket to the smell of horse manure, and then get them with the scrambler and flee. But that would end the survey before it started.

"Get them out of here," a man yelled. "Don't take any back talk."

All over the block people started yelling at them.

"Send them back where they came from!"

"Sic the dog on 'em!"

The cop gestured at the excited people. "You aren't disturbing the peace?"

A little girl ran toward them across the nearest lawn. "Go away, bad man! Go away! Bad man! Bad man!" Her mother screamed at her but she kept on coming. At the edge of the lawn she stumbled over a drainage ditch and fell on the sidewalk.

"My baby!"

The girl lifted her face from the sidewalk and screamed at him through her tears. Her mother ran up and bent over her. "Poor baby. Poor little thing." Glaring at him,

the mother lifted the sobbing child to her shoulder and carried her toward the house. "There, there. We'll give you something to eat. Stop crying now. Stop crying. How about a nice piece of candy?"

The dog growled again. "Who are you working for?" the cop repeated.

The sec remained silent. The cops glanced at each other. The one holding the dog grinned. "Let him do what he wants." They trudged back to their car.

Nicholson waited. The car didn't leave. Ahead of him the people standing on the lawn looked like some kind of macabre gauntlet.

He was supposed to turn right at the corner and spend the next three or four hours cruising through the neighborhood. Everywhere he went people would be standing on the lawns yelling at him. How long would it be before they got violent?

"Gggg . . . goo . . . aaa . . . aann . . ."

The sec pushed him forward. The people might curse him, but whatever they did, even if they hid in their bedrooms, they would tell him something about themselves. Even the shape of their homes and the stuff scattered on their lawns was revealing.

"Snooper!"

"Go back to your garbage pit!"

The cops followed him down the block.

He was too scared to function. He observed everything but his brain refused to produce any theories. He took it all in, the people, the elaborate toys, the houses, the food and amusements scattered on blankets and lawn tables, and even as it flowed through his nervous system his brain obstinately planned escape routes and what to do if they attacked. He couldn't think about anything else.

He tried to get his cowardice under control. He wanted to tell the sec to turn around, but he valued his self respect too much. Nothing could justify running away. Too much depended on this. Always in the past men who had accumulated so much power and wealth they couldn't be removed from office by normal political means had eventually been removed by death; men with slightly more advanced ideas had taken their place and society had lagged only a generation or so behind technology. Now death had been abolished and the rate of technical change was accelerating. He was here because he was convinced the only alternative to what he was doing was social collapse.

He tried to get his mind back to work by making it review everything he knew about Boyd's political career. His thoughtflow couldn't be controlled. Every time a new voice screamed at him, he began thinking about self defense.

"Stop him! Don't let him go any further!"

A girl jumped in front of the wheel chair. "He's from that milk company. I saw it on television. They're trying to make us buy bad milk. He's trying to poison us!"

The sec tried to move around her. She threw out her arms and stepped back. She danced down the street in front of the chair.

"They're poisoning the milk! They're poisoning the milk!" She was black haired and mercurial. A black dress swirled around her body. Flickering lights from two jewels in her collar, a popular type of cosmetic, played on her face and bathed her features in swiftly changing patterns of light and shadow.

Her name was Betty Delange. Her hair color had been changed and her body seemed more voluptuous, but he had examined enough pictures of Boyd's people to be sure it was her. She was the best psych technician in the Boyd organization. They were fielding their biggest guns right at the start of the war.

"He'll fix us so we have to buy it! He'll make us drink his poison! Stop him!" Her voice rose to a panic-stricken scream. "Why don't you stop him?"

People moved toward them across the lawns. A few of them ran but most of them walked. Even with a scream like that it was hard to get people excited nowadays. Life was comfortable and pleasant.

Faces swung past his eyes. Twenty or thirty people surrounded the chair. The sec tried to push through and then stopped.

"Is that the truth?" a man asked. "Who are you working for, mister?"

Most of the faces were young. There were a lot of teenagers in these older developments. The eyes of the men told him they had been attracted by lust as much as by violence. Some of them were looking at the girl more than they were looking at him.

His tongue quivered. "Nmnnn. . . . " His hands appeared before his eyes and he pulled them down. He was matched against a first-rate craftsman and he was helpless as a cripple.

Somewhere in the crowd he heard music with a strong rhythm and a loud, thumping bass beat. A young man was holding a gadget which looked like a radio but had to be a psych device. The rhythm was exactly the same as the rhythm of the lights moving over the girl's face.

"How do you know he's from that milk company?" an older man asked.

"I *know*. I saw it on television. It was on the news this morning." Boom, boom, boom. "They'll make us drink their poison." Boom. *"They'll make us drink their polluted milk!"* Boom, boom, boom.

The music was getting louder. The melody was fading out and the beat was coming in. Strong

rhythms were one of the most effective techniques ever devised for breaking people down and making them more suggestible. They had been used in voodoo and in classic brain washing and the current tribe of witch doctors still found them useful. The people crowding around him probably weren't even aware the beat was driving their emotions toward violence.

The faces looked at him. Violence wasn't natural to them. They hated him because he was a stranger and a spy, but if the girl hadn't appeared on the scene they would probably have stayed on their lawns and released their anger with their mouths.

His head was still swaying back and forth. His thoughts were still completely concentrated on saving his skin. They had him in a neat trap. If he used the scrambler or the psycho-active gases before they attacked, the cops would arrest him for assault with a dangerous weapon. If he waited until they attacked, he would only be able to eliminate one or two before the rest of them ripped him to pieces.

His right hand groped toward the arm chair and the buttons which controlled the generators. By making very small movements, he could almost control his muscles. Sound or scent might break up the steadily growing crowd long enough for he and the sec to break through and run for it, but he hadn't psyched the neighborhood long enough to know what would work on these people. Upsetting enough of a crowd to make a difference wasn't the same as temporarily surprising two policemen. Sound and scent had to be used with precision. They could be effective only when you knew your target. He might generate a stimulus which would actually fortify the girl's incitements. Even if he broke them up temporarily, what would keep them from chasing him?

The girl drew herself up and pointed her finger at him. Towering over him, she arched her back so her breasts stood up.

"He's a snoop," she yelled. "Who cares who he's working for? Do we want a snoop in our neighborhood?"

They looked at each other. They were still hesitating. Probably not one of them had ever before hit a human being.

He felt sick. He had come here fearing violence, but now that he was confronted with the reality, the ruthlessness of Boyd's staff disgusted him. Speeding off on a tangent, his brain tried to imagine the kind of personality this girl had to have. He couldn't figure out Boyd or any of Boyd's people. They were total mysteries to him. Didn't they understand? Mankind was living in a new age. If human life could last forever, then it was even more sacred than it had been in the past.

A boy slithered between two sets of bare legs. Standing in front of the wheel chair he looked at Nicholson with the cruel face of a child mocking the village idiot. He was carrying a huge ice cream cone, several red streaked scoops of vanilla piled in a high, dripping tower.

"How do you eat, mister? Show me how you eat."

"Get him out of here," a girl said.

The boy thrust the ice cream across Nicholson's lap. Startled, Nicholson moved his left hand. The ice cream shot from the boy's fingers and splattered on the sidewalk. The boy stepped back and brought his hands up to his face as if he were warding off a blow.

"Teach him a lesson!" the girl screamed. "What are you waiting for? He's spying on our minds. He's poisoning our milk. Get him! Get him! Get him!"

Boom. Boom, boom, boom. Boom. Boom, boom, boom.

A hand grabbed his shirt collar. Faces moved toward him. Eyes stared at him over cigarettes and slowly chewing jaws.

More than half the people here were smoking.

A hard, masculine hand slapped his face hard enough to make his eyes water. He moaned and instantly felt ashamed. The hand drew back and balled into a fist and his right hand tightened its grip on the chair arm. Less than fifteen percent should have been smokers. His brain was psyching again. Most of the people here were young enough to have reached their teens after the big anti-smoking campaigns of the Seventies. Why would there be more smokers in Greenplace than in the almost identical neighborhood he had surveyed last month?

The fist dropped and the blow snapped his head back and then forward, past the blue sky, the working jaws, the lips sucking on cigarettes, the artificially voluptuous girl, the people edging toward the chair, the fat bodies—the boy had deliberately moved his hand so he would knock the ice cream out of it!—the lawns, the houses like big, soft, edible. . . .

Orals!

They were all orals! Everyone in Greenplace was an oral!

"Give it to him! Teach him! Teach him!"

How could every person in a neighborhood this large belong to one psychological type? Could even Boyd's organization be that powerful? No wonder they had jumped him before he was a block in!

They were pulling him out of the chair. He could feel blood running down one side of his face. The hysterical beat of the music came to him through a ringing ear. He couldn't waste time with theories. They were going to hurt him. Compared to what he was

about to suffer, the pain he had just experienced was trivial.

He gave the man who was pulling him out of the chair a blast of the scrambler. Confusion and disorientation distorted the man's face. Screaming and flailing his arms he stumbled backward into the people pressing behind him.

Behind his back the sec made a strange sound. His mind was racing ahead at full speed. It had only been a few seconds since the second blow had hit his face.

His fingers wiggled on the buttons of the control panel. Formula Eighty-two. Only two digits. Each button had a different texture, a scheme he had worked out to help him use the generators while he was drugged. Two tiny points pricked his middle finger. Eight. He pushed.

He waved the scrambler in wide, sweeping arcs. It wouldn't hold them off forever but he only needed a few more seconds.

A rabbit punch sent pain shooting up his left arm. Hands grabbed his shoulders and shoved him forward and up. As he rose out of the chair, his forefinger slid across the smooth, hemispheric surface of the Two button.

He collided with the people standing in front of the chair and the crowd yelled with triumph. Their behavior was straight out of the textbooks.

A fist hit him in the stomach. He thrashed wildly and a hand grabbed his arm and spun him around. Pain made him close his eyes. Somebody kicked him in the ankle. He opened his eyes and through the brawling bodies he saw the sec fighting with a strange smile on his face.

The smell of human vomit filled the summer air.

All around him people gagged. The hands released him at once. He fell back and hit the ground waving his arms like a baby. He was gagging, too. The smell was enough to nauseate any normal human. On a crowd of orals the effect was terrifying proof of the fragility of the human personality. People pressed their hands against their faces and backed away from the chair with bent spines. A girl toppled over and blacked out. A man old enough to be his father stumbled away from the smell and then tripped and lay on the grass gagging and yelling for help. The stench permeated the air and clung to the inside of the nostrils and the mouth. It penetrated to the center of the oral personality and evoked terrors which had hidden in the psyche since infancy. It was the pungent, smothering antithesis of everything the oral personality needed and desired. Retching, hysterical, pursued by an odor they would never forget, the crowd stampeded.

The sec reacted fast. Strong arms picked Nicholson up and dropped him into the chair. Wheels

rumbled on the sidewalk. The girl jumped in front of them and then jumped back when the sec nearly ran her down. Even she looked sick.

Fleeing backs swung across his vision. To an experienced therapist the agony tearing through all those psyches was as vivid as anything he had ever suffered with his own consciousness. No cautious modern psychologist would have explained personality types with Freud's theories of infant development, but it was still true there were patterns of behavior which fitted Freud's terminology. People who got most of their pleasure and their psychological security from eating usually released their aggression with their mouths and made love with their mouths more than with their hands; tended to read certain kinds of literature and watch certain kinds of television programs; and could be manipulated by symbols and appeals involving food and the mouth and the emotions associated with the full, distended belly. There were at least ten such personality types in current psychological theory—Freud had only described four, but the world had changed and Freud hadn't known four types never applied for psychoanalysis—and theoreticians believed, or at least hoped, every personality on Earth could be classed in one of them.

He should have seen it from the first, but it was too fantastic to occur to anyone until the evidence became overwhelming. Imagine the power of an organization which could arrange for every person in a neighborhood to be one type! The Boyd organization had to be destroyed. This alone was enough to make him a fanatic.

The police vehicle tried to follow them but the sec took to the lawns and managed to evade it. In the process Nicholson did enough psyching to confirm his theory. That evening he called Bob Dazella in Washington and they both shook their heads over what he had learned.

"It must be great for them when they're campaigning," Dazella said. "Hundreds of voters, acres of territory, ten percent of Boyd's district, and they can manipulate every psyche in it with one tactic. I wonder how they set it up."

"Advertising's the best theory I've come up with. They could aim all their ads at orals. It still wouldn't be easy. Why don't you check around and see if Boyd ever had any kind of financial interest in Greenplace? Maybe he was in a position where he could control the ads for a few years."

"It's a good thing you worked it out. They could have killed you."

Dazella was a second term Congressman, an archaic political specimen these days. After he turned off the phone, Nicholson sat in his study and thought about

the campaign three years ago which had first put Dazella in the House. That had been his first taste of modern politics. It hadn't been pleasant. That time Dazella had nearly gotten killed.

This campaign was going to be worse. He could imagine the efforts the Boyd organization would make to control the minds of himself and his friends. They would attack his psyche with every weapon in the modern arsenal. As plainly as if it were a drama projected on a screen, he could see the psych technicians maneuvering across the Eighth Congressional District as both sides struggled to control the voters's minds and neutralize the work of their opponents. He could see violence, and danger, and all the dirty playing with the human mind he resented and wanted to eliminate forever from human society.

He had won the first battle, but that only meant he had to stay in the war and fight a hundred more battles. He almost wished he had lost.

And then there came Superman . . . and, after a while, departed. Shawn, who was of the Seed, wanted to know why. And how. Only Hawke remained to tell him. If Hawke would.

AFTER EVERYTHING, WHAT?

by Dick Moore

THE NEAT LITTLE FARM BROKE utterly unexpected out of jungle-matted crags. One moment there was only foliage tumbling away below the flier to New Brazil's indefinite horizon. The next, a small white house balanced serenely on a naked outcrop, and fields stepped down orderly before it, terrace under terrace, to the rim of a line of bluffs.

Shawn stared down and looked in wonder. His pilot caught the glance.

"Curious fella lives down there. Name of Hawke. One of the old Supermen. Claims to be the last of the line. Lives there alone since his wife died—she was an ordinary human, a lawyer's daughter from up the coast. He still buys his stuff in town, but he never hangs around long any more. It's beyond me how he makes that little spread pay. Jungle soil hereabouts is poison to most crop plants."

"The last *Superman*?"

"Yeah. Used to be a lot of them, I hear, couple thousand years ago. Never hear of them now, though. Hawke says he's the last."

"You know him, Oluchak?"

"Sure. Everybody around here knows him. But like I said, he keeps pretty much to himself."

"And is he really—a Superman?"

Oluchak heaved a profound breath, and his voice grew low with some remembered emotion. "Yes. No doubt about that."

"Exactly what is remarkable about him?"

Oluchak stared out the transpex for a long time. Then, pensively, "Ever watch a spaceship landing, when you're right at the edge of the dock? You know it's not going to touch you, but all the same you can't chase away the feeling that a couple thousand tons of metal is about to squat right down on top of you. Well—that's the feeling I get, looking at Hawke."

"He's—dangerous?"

"No. He's harmless, I guess. At least I never heard different. It's not that. Matter of fact, he's not even very big. I've seen lots of men bigger. But all the same, when you're looking at him you feel about two inches tall. He's friendly enough. You can't dislike him, hardly. But you get the feeling he isn't just quite human."

"Well yes, but what sort of super-characteristics does he show? Unusual strength, terrifying intelligence, ability to read minds or influence dice, or what?"

"Well, myself, I've never once known him to do anything out of the way. But now you take that jungle farm of his. He raises drug plants on it. I suppose those *would* grow better down there than most kinds of crop. But no other man I know of would try such a thing in the first place. The weeds and vines grow six feet a minute and the bush is crawling with hungry vermin. They don't fancy the taste of a man, but they'll sure eat anything else you put in their way. Yet he keeps the place going and makes it pay."

Shawn stared out at the jagged ranges without seeing them as the flier thrummed on toward Oluchak's hunting lodge. The Supermen!

They were a bolus of historical fact, swallowed with few questions by all authorities, the basis of romances uncounted, but—where were they? Two thousand years ago they had been bred, in old Earth's great Age of Science. They were supposed to be endowed with the perfection of every human capability. Strength. Speed. Longevity. Toughness. Genius. Telepathy and more mysterious powers. Peaceably, it seemed, they had gathered into their hands leadership in every sphere, and for a century or more they had been supreme. Then . . . what?

No revolution, no conspiracy, no overt disturbance of any size was recorded. Yet in the next ages the leaders were ordinary humans. Somewhere in between, the Supermen had simply dropped out of the picture.

It was not recorded that they emigrated or made any agreement to withdraw from the primacy they had so easily gained and held against all competition. History said only that once they were foremost; and later, they were gone. The lives of the worlds went on without them, unbroken.

Here and there the records showed their names and works in the earliest frontier days of stellar colonization. Evidently they had been leading spirits in the outward surge. But after that, rarely a whisper of their name. Today a third of the galaxy was full of men, but none were known to be Supermen, though millions claimed descent from them. Shawn's own world, Gramcorp, had been ruled

up to eight hundred years ago by a dynasty tracing its descent to one of those manmade demigods, Ardax, who ruled through his Greater America Corporation. But in the dynasty's subsequent chronicles there was nothing superhuman. To be sure, one family still claimed direct descent from the original Ardax, and Shawn was a not too distant relative. His ancestry was illustrious by conventional standards, full of rulers, priests, generals, merchant princes, poets, scientists and so on—but that was all.

In his student days he had been intrigued by the riddle of the great disappearance and nagged by historians' curious silence on it. But the galaxy was huge, the history of civilization unwieldy even in its outlines. Besides, his teachers assured him, the answer to every historical question was on record somewhere or other in the universe. One day perhaps he would check into it personally. But not now. Maturity had made Shawn head of a family and a successful exporter of precision instruments, and his adolescent projects for scholarly research had to be deferred until old age—if ever. Such time as he could call his own these days he preferred to spend on outdoor vacations, as now with Oluchak. For the moment, two hundred light-years separated him from routine and nervous stress and unanswered questions.

All but one.

He turned back to Oluchak.

"On our way home would you mind stopping off at Hawke's farm? I'd like to meet a living son of the Supermen once. Or—will he talk to us, do you think?"

A slightly painful smile creased Oluchak's brown face. "He'll talk to you. He's not sociable, you might say, but he's polite enough to people who drop by."

Three days later the flier nosed homebound over the mountains again. Behind the front seat it was crammed to the roof with sacks of shock-frozen flying salmon, shot on the wing as they soared in leap after leap to their spawning beds in the peaks. Shawn was still luxuriating in the aftertaste of the fillet he had eaten for breakfast when Oluchak broke the silence.

"Hawke's place is just a little ahead. Still want to stop?"

Moments later the little farm leaped once again out of the rumpled crazy-quilt of rock and foliage below. Oluchak swung down toward a bare spot behind the house and hung at roof level, waiting for a welcome. A rough-garbed man strode out of a shed and waved them down.

Landing, Shawn was passingly conscious of a clean white bungalow, a shed emitting warm beast smells, a tall close-knit rural figure lounging hands on hips while they disembarked.

"Good morning, sirs. Free-planter Regis Hawke at your disposal."

Shawn looked toward the farmer's face.

Instantly every nerve in him clanged like a gong, not with fear, but with a cataclysmic leap to awareness. It was as though he had been wandering idly across an empty field and looked up to find himself face to face with a lion. Emotions he had never believed in poured hotly through him, feelings related to but not the same as terror, amazement, love at first sight, grand music, quaking inferiority. For a long undrawn breath the universe uncoiled from Shawn and reshaped itself around the other.

The face of Hawke was smooth but not young, handsome but only incidentally so. Black rough hair, stabbing dark eyes. An aura of god or monster, of a huge male strength unfettered and illimitable, an excess of conscious power that overwhelmed by its naked existence.

Then Shawn felt cheerful goodwill radiate from the face, and expectation: he was being invited to declare himself. Slowly identity flowed back into him. He drew around him the edges of his ego and thanked his tutelary deities for the face-saving conventions of men, the not quite meaningless formalities that build a guarded bridge between self and self. He tried his tongue; it functioned.

"Good morning, Free-planter Hawke. I'm Free-executive Redwing Shawn, a stranger around here, just back from hunting in the hills with Free-guide Oluchak."

"How was the hunting?" On both sides the words were consciously banal, but Shawn felt as though he were braced against a living force that threatened to strip him of self-consciousness and turn him into a satellite of the Greatness before him. And the force was not an alien thing; it came from within Shawn himself.

"The hunting was every bit as good as advertised, I would say. We bagged as much as we could carry home."

"The salmon have been running thick this spring. Will you step inside for a little refreshment, Freemen?"

As Shawn settled on a bench in the small clean kitchen-sitting-room of the bungalow he remarked, "We've had breakfast, Free-planter, but some of the coffee you raise on this planet would certainly be a pleasure." Hawke smiled and poured out.

Shawn sipped with rare appreciation. In Hawke's presence, or at any rate in the first jolt of it, all his perceptions seemed to have opened their eyes for the first time.

Hawke poured a cup for himself and sat down in a well-worn theater-chair with a built-in play-

er; of Gramcorp make, Shawn noticed. After a few moments of chat and counter-chat, Hawke straightened up as though the old chair were a throne and asked formally, "Is there anything in which I can oblige you, sirs?"

"Yes, sir." It was possible to be polite in Hawke's presence—indeed nothing less seemed appropriate—but it was not possible to be evasive. "Free-planter Hawke, there is a question I would like to ask you. But if in your opinion I intrude on personal matters, I beg you to consider it unasked and wave it aside."

Hawke smiled. "I am not so easy to offend."

"Free-planter, my friend Oluchak told me that you are the last of the Supermen."

"I may be wrong, but I believe that is true."

"Then this is my question:

"All my life I have wondered what became of the Supermen as a race. According to the ancient authorities they were supposed to be practically immortal. Yet—they seem to have vanished from the universe, except for you. Tell me, sir, just what were they, and what was their true fate?" *There now,* he thought, *it's out in the open, the question that has haunted me since I was a boy. And why has no one asked it before? Or—were they afraid to repeat the answer?*

Hawke looked thoughtful. "It was never supposed to be a secret. But it was a thing difficult to believe and more difficult to communicate, the fate that took us.

"My people, you know, were deliberately bred by men of science on Earth two thousand years ago. The methods are fully known even today, but they have never since been applied in such a thorough-going manner, nor on such a scale. There were over three hundred thousand of us at one time, and I believe that if the facilities had been available our creators would have converted the whole following generation into our image. They gave us every quality they could conceive to be useful or ornamental to a human being: titanic strength, high intelligence, longevity, immunity to disease and accidental death, even ESP. They felt that with our birth man had taken control of evolution and become the creator of his own future. For us they entertained such hopes as for none other of their achievements."

Remembering the novels he had read in his teens, Shawn shivered slightly. "Sir, were normal humans never frightened or jealous of you? Didn't you have to struggle with them to claim your own?"

"Are *you* frightened?"

Shawn was silent and confused. What he felt in Hawke's presence was intense and unforgettable; still, it was not fear. That irresistible strength was irresistibly friendly. Hawke answered for him.

"No, we were the favorite children of the race. They gave us their best with honest joy. They yielded us supremacy and cheered all our achievements with parental pride. Of course we outstripped them in everything we undertook, physically and mentally; but that was what we were bred to do. They appropriated our glory to themselves because they had made us, and rightly so. We set unapproachable athletic records. We planned and carried out researches whose complexity they could hardly imagine, much less follow. With our extrasensory insights and integrating powers we wrote what I still believe was the human race's most profoundly moving music and literature. But all these things belonged properly to the old race, because we were still their children, in body and mind.

"Each of us had longevity, the promise of time to develop his qualities to the utmost. But we did not so develop them, or not many of us; least of all I. It is in more than one sense that I must call myself the last of the Supermen."

"Sir," Shawn protested, "if you succeeded so well and commanded such universal respect, it seems unreasonable that you should all have disappeared in—historically speaking—such a short time as two thousand years. I would judge, sir, that you are far from old by your own standards. And I would guess that you come from a generation fairly near the original source."

Hawke nodded. "The first generation. The first brood, in fact."

In Hawke's presence that statement seemed reasonable enough.

"And yet, sir," continued Shawn, "since you call yourself the last, I deduce that your whole breed but one has vanished away or—died out?—in the course of what was to them *one* normal lifetime!"

"For us there is no normal span, Shawn; we live until we die. And yet—I am the only one of us who has lived so long."

Shawn eyed the dark thick hair, the tree-solid body. "You seem to be in no immediate danger, sir."

Hawke smiled. "I may never grow grey or feeble, Shawn. None of my breed ever did. Those who died were all in their physical prime."

"They *did* die, then!" And with that thought one of the bright-colored threads in Shawn's mental background broke and raveled. One more wonder gone out of the world! "Sir—how *could* they have died? Not naturally?"

"Not naturally in your sense of the word, perhaps."

"Then—what killed them?"

The world-filling strength darkened, furled, brooded. "An enemy without a name, Shawn."

Shawn's mind leaped back to the perennial legends about Menaces From the Outer Dark. "Some-

thing that not even your people could handle? And you were supposed to be invulnerable!"

"Tell me, Shawn, what enemy can destroy an invulnerable man?"

"None!"

"Yet one did. Three hundred thousand particular times."

"Do you know what it was, sir?"

"Yes."

"And yet you can't name it."

"No. Nor could you, if you knew what it was."

Through his confusion Shawn was aghast. "Is this enemy still on the loose, sir?"

"I am afraid so."

"Is—are you his only target, or are the rest of us in danger too?"

"Possibly. You recall the recent unexplained death of Landor Sigmo?"

Shawn did, of course. The great Eltanian poet and philosopher's death had been a shock to most of civilization. Shawn had read his best work and believed he was the finest mind of the century.

"No cause of death was announced," Hawke went on, "but having known him personally I suspect that he died of the same cause. Sigmo was well known to be descended from our blood."

"So am I, sir, although distantly."

"I could see the signs when we met."

"You would, sir, of course. Then —am *I* in any danger from this invincible enemy?"

"If ever you should be, Shawn, you will know at once. But what can save you in that case is beyond my limited wisdom. I have fought it and run from it many times in many centuries, and am still by no means sure of saving myself. Today this farm is my fortress. It has protected me for twenty-three years, but it cannot do so indefinitely. Self-exile like mine is a sapping thing, a last resort of the desperate. I am a desperate Superman, Shawn, and I can see plain in the distance the day when I will be cornered and finished off."

"Is there no help possible?"

"If there were, would we not have furnished it to each other? No, I fight alone. And so must you if your turn should ever come."

Hawke escorted them back out into the brilliant sunlight, and Shawn threw a glance up and down the shining acre of glossy leaves nodding in neat confident ranks on the terraces. A fortress this! Of course some people might attribute magical efficacy to certain plants—but this was a Superman two thousand years deep in understanding.

As they stepped back into the flier Hawke said in parting, "Next time you visit this world, Shawn, stop by again. Some day," he grinned, "you may ask a question I can answer!"

Shawn's head was full of undigested hints as they took off. A Superman armed with every power

the race could produce; a nameless faceless enemy who made nothing of those powers, who sooner or later triumphed in every case; a farm that was, though not visibly, a fortress—which must some day fall.

But as the farm disappeared behind he was conscious of a quieting within him, a lessening of internal pressure as he withdrew from the vicinity of that overwhelming presence. Doors closed in his emotions, and the world slowly resumed its normal taste and feeling.

He could find nothing to say until Oluchak was seeing him off at the Shawilla spaceport. What he said then had nothing to do with what he was thinking.

Like many successful executives, Shawn was a man given to hunches and sudden ideas, and his file secretary asked no questions when he ordered a complete report on his direct ancestors, nor when he asked that the report emphasize their personal achievements and their time and manner of death. When the report came in he locked himself in his office all evening to study it.

Every man and woman on the list was at least tinged with the Super blood. Nearly all were distinguished and a few were truly outstanding. He winnowed out the most prominent and compared their deaths. Most of them had died in a good old age by normal standards, but the descendants of the Super strain still showed unusual staying power as a rule, so that meant little by itself. One, a general, had died in battle; that did not interest him. A Superman could not, except by the sheerest multiplication of coincidences, be killed by violence, and Shawn was tentatively assuming that whatever *did* kill Supermen would attack lesser men by the same tactics. "An enemy without a name" would indicate something inherently difficult to describe, something perhaps which left no trace except the visible fact of death itself. Such deaths he was looking for, then.

If only a man could be sure!

If ever you should be in this danger, Shawn, you will know at once. He did not know; therefore he was not in danger—yet.

He thought he found three suspicious cases. They were all men. They had all been immensely able and successful; one had been an Emperor. They had all withdrawn from society at the height of their careers and fled into solitude. And they had all been found dead without visible cause.

Pure coincidence?

From force of habit he pushed away the report to dial the midnight newscast. The picture of a man bloomed out at him, and the face was instantly familiar: his third cousin Dranv Ardax, one of the richest men on the planet, one

of the most outrageous too, yet one of the most liked as well. And on the side, very much on the side, a practicing necromancer.

". . . Found dead in his tent, in his great hunting park, where he went alone four days ago . . ."

"Gone to join his spirits," muttered Shawn.

". . . No signs of violence . . . no trace of a weapon . . ." and the picture became a one-man camp in a breathtaking forest. ". . . There was a large quantity of food and water within easy reach . . . cause of death not yet announced . . . body found undisturbed . . . apparently passed away in his sleep . . . park has been positively certified as containing no plagues or poisonous organisms . . . authorities will make an announcement . . ."

It might be like this, Shawn thought, if the Enemy were to strike before his eyes. Invincibly healthy one day, incontrovertibly dead the next, with no way to explain the transition. He was thoroughly sorry; he too had liked the sardonically cheerful Dranv. And what a way to go! he thought. The young fellow was only forty-four, with a brilliant career of miming, playwriting and poetry already behind him. He had the difficult art of understanding all, forgiving nothing, and making everybody love him in spite of it.

". . . Last words, as committed to his wrist recorder, were these, which we bring to you by the express permission of the house of Ardax."

And then Dranv's cultivated, cadenced voice, dramatically muted even in its perfect sincerity at the most dramatic exit of his career:

"It is enough. I have won over to myself every enemy I ever made —but who can win over this one? I have surmounted every barrier— but this is not a barrier to be surmounted or a riddle to be solved. To this I can only surrender."

Who can win over this one?

I can only surrender.

Shawn never heard the rest of the newscast. Every follicle on his body was in a crackling state of bristle; electrical storms chased themselves over his skin.

For days afterward Shawn was half-disorganized with horrors that would not assume any definite shape or name. If Hawke spoke truly, Shawn himself was not in any danger. Still, there was a plague abroad in his own world that made the finest its victims, and he knew nothing either definite or helpful about it; only that it was irresistible, that it ignored everything going under the name of immunity, vitality, tenacity of life.

Somewhere in his reading he had come across an ancient line: "The last enemy that shall be destroyed is Death." His education had taught him to beware of capitalized abstractions, but this

Thing that walked in and walked out again with a human life in its grip, leaving no footprints, was too inhuman and uncanny to be regarded with cold objectivity. Like a man who in the wrong frame of mind has happened to glance out of a lighted room into the dark, he was possessed by the consciousness of huge black unknown spaces that terrified his inmost soul.

Hawke was his only source of information, so back to Hawke he must go. At the moment the idea appeared, something in him grew merry with suppressed delight; he felt the latches turning on closed doors in his psyche again. He issued himself a leave of absence and made a reservation on the next flight to New Brazil.

It was no easy task to reach the little farm again. Oluchak was away on business when Shawn arrived, and no other guide was available. In the end Shawn hired a livery flier and set off in what his map indicated to be the general direction of Oluchak's lodge in the mountains. Guessing at the distance, he flew about three-quarters of the way to the lodge and then turned and began to beat back and forth over the ranges. By midafternoon he was hot, hungry, buttock-weary and foggy with eyestrain. Almost without noticing what he was doing he found a curving line of bluffs, followed it and came out at the farm.

His spirits revived instantly. Here lay delight, wisdom, protection, perhaps even answers. He landed behind the house and sat waiting for Hawke to emerge.

Half a minute later he was plucked out of his golden anticipations by the insistent awareness that Hawke was nowhere in sight or hearing. A feeling began to creep over him that the farm was untenanted completely. The animal shed was not merely empty, but clean. The fields had been harvested and the machinery stored away. Flying things and creeping things twittered and scurried boldly across the yard and over the buildings. Every window of the house was shut. Over all was an impression of final abandonment which firmly excluded the notion that Hawke had simply gone off to buy supplies or lay in meat for the winter. His mere presence was enough, so long as he wished it, to keep all animal life at a distance; but crawlers, hoppers and buzzers were making themselves gaily at home, welcoming the farm back into their long-violated domain.

Hawke was gone. His fortress of desperation had been evacuated. Or taken.

In weary disappointment Shawn got out of the flier and mooched around the yard, scattering small animals at every step. A sense of disaster seemed to be condensing out of the air around

him and precipitating in the pit of his stomach. He went up to the bungalow and stared at the silent door. Under that lock had lain the resolution of his fears, the coherence of his vague reasonings. Now . . .

His palm had fallen musing on the lock panel, and with that gesture the door opened. It opened as no door to an empty house should open, for a standard lock would respond to strangers only if the owner were at home. Shawn looked through into total darkness; someone *was* at home then, and the house was guarding his sleep!

Shawn took a step inside, then another, and was swallowed by the darkness as soon as he passed the doorsill. He waited while the light-cancellers adjusted a little. A dull twilight seeped into the room in response to his presence. Someone in the house was sleeping still, it would seem, and that sleep must be shielded from all disturbance; but courtesy forbade that a visitor should stumble. There was no sound, though Shawn trod a hard floor; the dutiful house absorbed every whisper. All he could hear was his own agitated breathing.

Then as the house adapted to his presence an aura of daylight formed about him and followed him around; the light-cancellers were heterodyning themselves out wherever he stood. He wandered around the small plainly furnished kitchen-sitting-room, found a bedroom door, palmed the lock. But it stayed shut. Yet he now could plainly *feel* Hawke's presence inside. Waking or sleeping, the man could not be overlooked.

He stood in the dim room and revolved slowly, straining to pick up some clue to the nature of the situation. Hawke had closed down the farm and was now—hibernating? Or something worse?

His eyes roved the room; it held little. A combination food-storer and automatic cooker, with a disposal grate below. He opened it: empty. A chair and writing shelf. No desk. Evidently Hawke kept his accounts in his hat. The well-worn theater-chair. A handmade rug. All clean, neat—and deserted.

But the cold ball of dread in Shawn's stomach was dissolving slowly. Hawke was still alive after all. It might be simply the manner of his kind to—what? Shut themselves down, perhaps, to recuperate from periods of stress? The room seemed to offer no clue. Shawn closed his eyes and stretched out his inner eyes and ears, feeling for *some* subliminal hint, some faintest color of an impression that would serve to guide his guesses.

Nothing. Except Hawke himself, behind a locked door, unconscious and inaccessible. Nothing.

Idly Shawn sat down in the theater-chair, snapped on the play-

er and examined its contents. His first impression was that Hawke had gone in heavily for the antique: Capel, Burgess, Bradukhov. . . . Then with a nervous chuckle he corrected himself. Most of the compositions in the index had been new during Hawke's own enormous lifetime. Perhaps he had seen some of them performed live by the original artists! Shawn's imagination glittered for a moment or two, recreating a vision of fabulous first-nights that now were only names and dates in some student's dissertation: face-to-face meetings with Firdauzi, Sheehan, others whose long-scattered ashes had once clothed living genius. . . . Some titles were even older than the Superman himself: The *Erinnyes,* the *Commedia,* the. . . .

The selection most recently played was Capel's synthopera *Gilgamesh.* In a vague hope of getting even a little closer to Hawke's state of mind before he had—gone to sleep—Shawn pushed the replay button. The opposite wall lit up.

For the next hour and a half he watched the unrolling epic of the pre-historic hero-king, two-thirds divine and one-third all too human, who ransacked the world for the secret of eternal life; who performed prodigies of striving and journeying to gain it; found it at last, and then—while he slept!—lost it.

Still no clues, really. The stage faded at last to a mere glowing wall, and he sat staring at it with a mind as blank and imageless as itself.

It isn't normal, he told himself, *that there should be such an absolutely neutral emotional atmosphere five yards away from a being who radiates emotions so strongly. No faintest echo or afterimage in the house that he and his sometime wife inhabited for half a generation. Why, even the ruins, a century from now, should resonate with his memory! As I always shall.*

"And yet," he added aloud, "even an ordinary transmitter isn't limited to broadcasting sounds and pictures. You can also, if you choose, broadcast silence and darkness."

Silence. And darkness. Silence. And darkness. At once it leaped out from under the edge of his perceptions that this was, indeed, what was overflowing the house, and blotting out all but faint traces of living emotions within it. A heavy, liquid silence, like that in a forest at noon.

"The power of negative thinking," Shawn laughed; but the laugh died away into irrelevance. He was sitting on the bottom of a grey sea of silence that seeped softly into his bones, slowly dissolving thought and feeling.

It was a minute or two before he realized that the screen was no longer empty.

Opposite him sat a figure, once seen and forever familiar, in a theater-chair the image of the one under him. It was methodically stuffing and lighting a pipe, giving him a few moments to collect himself.

All his perceptions gathered themselves up from afar and leaped together with a silent clang. Unconsciously he balanced on the edge of his seat, waiting. At last the projection raised its eyes. Through all the barriers of time and silence and machinery he felt again the impact of that gaze, and while one part of him shrank and trembled uncontrollably, other parts seemed to open and bask like flowers in the light of those awful eyes.

Hawke's recorded face wore a look Shawn had never seen before, cordial but inhumanly remote, pervaded with a dim and ancient calm, an impersonal sadness, like Arctic twilight. His voice was as still as his face, but even in transcription its tones kept their power to churn the blood.

"I am pleased to welcome you once more, Free-exec Shawn. It is pleasant to see that you are well and prosperous. I wish I could say the same of myself. But if you will permit me to stretch the bounds of courtesy by referring to myself, I must confess that I am not at all well. While I sit here making this recording, I can feel the approach of the Enemy. When you get here and see this—if you do—I am afraid I may not be available to greet you in person. But it occurred to me, when last you left, that in due time you might return to discuss further the question that troubled you on the day we met. I knew that you must come to me, because there was no one else who could enlighten you. And now that you have, no doubt, done enough research to form an idea of what the Enemy is *not*, I may be able to intimate to you what it is. Little enough good it will ever do to explain it; but no harm, after all.

"Tell me, Freeman Shawn, do you understand why you yourself are such as you are? Why are you a space traveler, for instance?"

Startled into answering, Shawn said involuntarily, "All my people are space travelers."

"For what reason?"

And Shawn found himself answering the unhearing but expectant image again. "Because there are so many of us. We and our affairs overflow the limits of any one planet."

The image waited to let him say more if he chose, then went on. "How did you come to be so numerous?"

"Natural increase," responded Shawn, "aided by science and hard work. We conquered our environment, disease, pain, injury, ignorance, insanity—"

"And when you had conquered those, why did you not settle down

to enjoy in comfort a world fairly won?"

Shawn searched the smooth-skinned ancient face on the screen for a clue to the point of these questions. "We can't settle down! Idleness is the luxury of tired old men. For the rest of us there are too many things that have to be done. There is too much to learn, to accomplish, to discover. There are still enemies and difficulties to overcome. And I for one have no two thousand years to spare!"

The old young man smiled without sarcasm. "And do you think that people will *ever* be satisfied with what they already are and have?"

"How can we be? Tomorrow the most gluttonous of us will be hungry again. *If* he is alive tomorrow."

"Two burdens you will always be carrying then: hunger and fear."

"As far ahead as I can see, sir."

"What if these burdens should be removed?"

Shawn was silent, puzzled.

"What if you could know that you would *always* be provided for? What if you knew that you would *always* recover from injuries, however serious? What if you knew you would *always* be equal to an occasion? What if you had no enemies and almost no uncertainties? Would you be satisfied *then?*"

Shawn remained silent.

"I will tell you: you *would* be satisfied. But you would not be happy. If you knew from the beginning that you were sure to succeed in whatever you attempted, you would gradually lose all pleasure in carrying things through. If you knew that hardly anything could harm you, that your life had no predictable limits, the beauty of each new sunrise would eventually sink into the anticipated monotony of ten million sunrises to come. Not love, not hunger for knowledge, not even madness can adequately fill in such a huge canvas! If you found out that everything in the universe was, in effect, yours for the wishing, nothing would retain its unique value."

Shawn could feel a fancied burden of unlimitedness settling heavy on his shoulders as the voice went on.

"That became our condition, Freeman Shawn. Others' condition at first, and now at last mine.

"All properly human feeling, and therefore by derivation all human thought, shows a timeless two-part pattern: Arousal and Satisfaction. You experience a disturbance of your inner equilibrium, resulting in a tension that seeks to restore that equilibrium. The tension is relieved by action and you are at ease again. There are many names for this pattern in its various applications. Tension and Release. Question and Answer. Pain and Assuagement.

Need and Satisfaction. Conflict and Resolution. Desire and Fulfillment. Beginning and Ending. In this pattern alone is Meaning, as human beings understand the word. It is the basic shape of all our experiences.

"But for my people, once they had exerted themselves and proved their powers, anticipation was replaced by certainty. Tension blended into release, need grew one with satisfaction. We felt ourselves sinking from our first estate into a vegetable condition, to a state in which beginning and ending are not distinguishable experiences but only arbitrary cross sections through the featureless flow of time.

"Our energies waned for lack of any inner need to call upon them. To put it mechanically, we were under-engined, disastrously under-engined. Our motivations were unable to bear the burden of our powers, because although our powers were superhuman, our motivations were no different from yours.

"At last consciousness itself began to wane in us. A few of us at first, then more and more, simply went to sleep and expired without a struggle. All our great accomplishments were limited to the first century or so of our lives, and after that we began one by one to decline.

"I myself have been fighting off senility for a millenium and a half. I feel chronically half-choked with sleep. I have actually fallen into long sleeps four separate times. But I was one of the earlier and perhaps more primitive types produced, and some of the rage of my fathers stirs in me yet. I have always wakened again, so far. But the attacks come closer together each time. Each siege is more severe, and each recovery more protracted and uncertain. I can feel myself going under again, and this time I may not wake.

"I have stayed alive this long by finding myself problems. Time and again I have started out on some raw unpromising world. Time and again I have grown rich and famous and important almost in spite of myself. But at length sleep would always threaten and I would have to run away.

"I thought this present problem was more refractory. I've scrabbled among the rocks on this hillside for twenty-three years, and every harvest is still a toss-up in spite of all the skills I have acquired. Here life seemed still uncertain—therefore still interesting. I *could* have starved to death!

"But in spite of all this I have felt myself slowly degenerating as time passed. Not into an ordinary man, alas, but only into an empty ruin of myself, a man haunted by his own ghost. Often I have feared that some day the last of the Supermen would be dead—and I still alive in his brain and body!"

The image paused and took a long pull at its pipe.

"I and my race were your fathers' attempt to turn the human race into gods. We were a showy failure. Now perhaps men can begin to find it plausible that the gods created *them* and not vice versa."

Shawn straightened up on the edge of his seat. "Has evolution come to a dead end with *us*, then? I can't believe it!"

The image on the wall poked its pipestem at him. "Your acquaintance with paleontology should remind you that when Nature wants to achieve a new success she always takes a new direction. Your fathers' mistake was to think they could elbow Nature aside and take over her place in the universe themselves. We were a gigantic misconception, an attempt to carry on as far as men could go down the same old lines. As the dinosaur multiplied to himself armor, and perished under it, so we overloaded ourselves with purely human abilities and they ruined us. Great as we seemed, great as we undoubtedly have been, we were out of date from the start."

"Then, sir," Shawn asked the illusionary face, "what *is* the next step in evolutionary progress?"

"Free-executive Shawn, I can't see the age to come. Not even I. But by the logic of history I know that whatever sort of creature inherits the universe from you will not resemble you in any way you consider important. Perhaps you are acquainted with it already and dismiss it as beneath your attention. And so it is, for the present; it is your heir, not your rival. Be what it may, it will be a supreme illustration of the lesson that was ignored in making me: the most plausible solution to your problems is generally wrong.

"One thing I *am* sure of. You, and not I, are the climax of our line of development. Your race has lived and flourished while mine died out. I know of no argument more conclusive."

The glacial face smiled wistfully. "I wish I could stay to see you, Shawn. But I can feel the darkness rising in me. Tonight, or tomorrow night, I will close my eyes and—may not open them again.

"Rejoice and prosper, Shawn."

At last Shawn realized that the light he now saw on the wall was only sunset slanting through the windows. He stirred and looked around. The light in the room was clear, though dim and ruddy; the light-cancellers had turned themselves off. Outside the door he could hear plainly the squeaking and slithering of hungry little beasts around and all over the outside of the cottage. Daylight and daysound were coming in again freely; the silence was gone, the

house had shut off its privacy-protectors. Shawn stood up and switched on the room lights and listened. Then he went over to the bedroom door and palmed the lock. It gave, and the door began to open. He waited.

The tremendous presence was gone. He was alone.

He walked out to the flier, but some dim ancestral memory rose in him and ordered him back. He took some food and drink and went back into the house, back to the chair. Then he settled down for a night's long waking, to pay the human race's last respects to the mighty dead.

TREAT

There was one day a year we could relax
and be our plastic selves, one day or, rather,
night, when we could let go, dismiss the bother
of daily fossil faking, the rigid hoax
of identity which rodded our aching backs
and turned our ego covering to leather,
one day in all the year to loose the tether
and frolic in the meadows of their tricks.

What lettings go we had, what meltings of
tension, what suspenseful waitings for the
gatherings and the soft shriekings of dusk.
And yet, despite the season's grotesque love,
the little monsters may have wondered why
we answered the bell in what they thought were masks.

—WALTER H. KERR

"No! No!" we shouted when informed that a Computer Story by Ernest Hemingway (or perhaps William Faulkner) had been found and was available to us, cheap. "No! No more Computer Stories!" *Somehow, this one by fertile, friendly Jack Sharkey got through the barrier to us—we read it, unwarily—we bought it. Mr. Sharkey is now (our Mr. Pettifogle happily informs us) with PLAYBOY. We wonder if PLAYBOY uses computers . . .* ?

BREAKTHROUGH

By Jack Sharkey

MERILL HUNNECKER PUSHED his way through the curious crowds that were swiftly gathering outside the cracked, flaming edifice he had just departed moments before the explosion, and—walking down the broad avenue like a man in the grasp of a smiling dream—made his way to central police headquarters. A pert young lady in a trim, dark blue uniform told him the location of the particular department he sought, and he made his way there in the same clear-eyed but somnambulistic fashion. He entered the room and stopped before an old wooden desk behind which a heavy-set, pleasant-faced man in mufti was fiddling with a bent-nail puzzle. The man looked up and smiled. "Can I help you?"

"I want to report a crime," said Merill.

The man's eyes clouded slightly, but the smile remained.

"Have a seat," he indicated, meanwhile putting the puzzle, with some slight show of reluctance, into a side drawer of the desk. Then he unclipped a pen from the breast pocket of his shirt, uncapped it, and waited politely with the point poised over a pad of thick yellow paper while Merill sat down. "Now, just tell me what's happened, as simply as possible."

"I wish I could," said Merill, his lips forming a ghostly echo of the other man's smile. "My crime is anything but simple, however."

The cloud deepened in the other man's eyes. "You say *your* crime?" he asked softly, the tip of his pen making a quick notation upon the pad. "May I have your name and address, please?"

"My name is Merill Hunnecker. Until today, I was employed at Jefferson Cybernetics." Merill saw the man's eyebrows raise a trifle, though his eyes remained on the pad before him. "Yes," Merill said, answering the unvoiced query, "the research building which was blown up not half an hour ago, the reason for all those wailing sirens your window does not quite keep out."

"Go on, Mr. Hunnecker," said the man, pen waiting. This time, though, his pale blue eyes rose and met Merill's gaze for a short, silent appraisal before returning to the pad.

"I'll have to start back quite a few months," Merill said. "Otherwise, you won't understand. And even then, I'm not sure you'll—"

"I'm paid to listen, Mr. Hunnecker," the man said, with no hint of sarcasm. "Go ahead."

"Well, as you probably know—No, come to think of it, there's no reason anyone outside scientific circles *would* know—At any rate, I am the inventor of an advanced computing machine, the sort popularly referred to as an 'electronic brain'. The machine was completed a little over two years ago, at the Jefferson building. I was in complete charge of its operation and education."

"Education?" asked the patient scribe, his tone puzzled.

"A useful term," Merill said, with less patience than his auditor. "It's much less wearisome than the repititious dunning of facts into school children. Information which the machine is to have is coded, punched onto a card, and fed to its memory banks. Thenceforth, it 'knows' those facts and cannot forget them. Were the punched cards in readiness, the machine could learn the entire Bible in under an hour."

"I see," nodded the man behind the desk. "Go on."

"Well," said Merill, "after the second full year of operation—

One of my men taught it to play chess. The names and values of pieces, rules of moving, and object of the game were all that were necessary. From the moment the coded card was fed into the machine, it knew chess. It knew every possible move, every possible countermove. Unlike many a novice chessplayer, it could not be duped at the outset by the annoying three-move "fool's checkmate". It would play by typing its moves on the coded keyboard at its forefront, and the person playing—at first the man who had taught it; later, his coworkers who thought it fun to pit their minds against its own—would make the move the machine had indicated. Their amusement soon wore thin, however. Because, from the start, it never lost a game. Perverse as the ways of the world are, this insignificant talent—chess-playing—became a sort of 'narrative hook' for the news-hungry

press. Its manifold other talents they ignored. But a machine that played games was *News*. As a matter of fact, chess being an intrinsically mathematical game, this 'talent' was no more spectacular than an adding machine's 'talent' for arriving at the correct solution to the problem of two-plus-two. I was against having the building invaded by masses of scribbling reporters and lady editors of small-circulation family magazines, but—The men financing the project (like most inventors, I am myself impecunious, and must turn to those of less mentality but greater business acumen to achieve my ends) —These men were highly in favor of what they termed "good publicity." I protested in vain against the interruption of my work. I was asked—politely but inflexibly—to "be congenial." I concurred with what small grace I could muster. And then, this morning, the reporters converged upon me. At first, I was hard put to be polite with them. After answering a number of insane queries, however, I began to forget who they were and why they were at the laboratories as I warmed to my subject. The machine, I should explain, has been my pet project for most of my adult life, gestating in my brain for many years before its actual physical 'birth' at Jefferson Cybernetics. Despite my natural antipathy to the gaggle of goggling newspeople, once I began to speak about my creation, I could not help but be a bit boastful. I daresay I showed more than a modicum of enthusiasm in replying to those parrot-brained slaves of the almighty deadline. Their greatest area of inquiry, of course, concerned the—to them— astounding fact of the machine's inability to make even one careless move in a chess game, with the result that it could never fail to win. I explained in the simplest terms at my command, hoping their scurrying pencil-points could capture something that would read sensibly in the evening editions.

"It cannot lose," I told them, "because it has no— in the literal sense of the term— *self*-consciousness. It does not know it exists; in that area only does it differ from the brain of a human being, who also possesses a mind, the self-aware controlling force of the physical brain. And because it is unaware of itself as an entity, it lacks pride in achievement; therefore, it cannot fear losing. For, with a little thought, you will see that it is only a man's *concern*—or worry, if you will—over the outcome of a game that causes him—unless, of course, he lacks the basic mentality —to lose it."

I paused at this point to fill my pipe, tamping down the tobacco with care, in order to—I must confess—look like the stereotype of the learned scientist to those dunderheads, all agog at the thought of

recording for their readers the tale of a multi-million-dollar artifact that could not be beaten at an inconsequential game. A pipe, I knew, made me *look* intelligent to them (as though brain-power was an adjunct of physiognomy)!

But I had been ordered to be congenial, and congenial I was, though my 'intimations of deep thinking' were brought on—just fractionally, mind you—by an inordinate dread of coming off second-best to my own creation. At any rate I made my hoped-for impression upon the cameramen, two of whom took my photograph on the spot. Oddly ingratiated, I puffed a thin column of pale blue smoke toward the ceiling of my office, smiled as wisely as I knew how, and—

("Excuse me," said the man behind the desk. "I was under the impression you were at the site of the machine."

"Oh, no," said Hunnecker. "Smoking cannot be permitted near an electronic brain; it must be kept in a constantly air-purified room because its parts are sensitive to dust, smoke or any sort of airborne particle."

"I see," said the dogged scrivener, and Hunnecker went on with his story:)

"Since the workings of a chess game," I informed them, "are not familiar to the majority of your readers, perhaps I can best exemplify the machine's function through a more commonly known game, the one called 'Buzz'. In this, as you know, a circle of people begin to count off the cardinal numbers from *one,* varying only when the sequence reaches either a number divisible by seven, or one containing seven as a digit, such as seventeen. On these numbers, the person whose turn it is must say 'Buzz', and then the count *reverses* its way around the circle. Played at high speed, someone is almost certain to err in 'tricky' areas such as twenty-seven and twenty-eight, the seventies themselves, or—should the game somehow proceed beyond eighty-four—at numbers like ninety-one, ninety-eight, one-hundred-five, and so on, since most persons seldom learn their multiplication tables beyond the twelves, and seven—divisible numbers become difficult to recognize."

They scribbled my words with diligence and haste, and I felt quite pleased with myself as I continued. "Now, a human being—in the game of 'Buzz'—becomes edgy. His emotions impinge upon the processes of his mind, the longer he is forced to stand upon his mental *toes*, as it were, dreading the moment when he will err. But my machine could have no such difficulty, simply because it would be coded to remove sevens from its memory, and to simply employ the term 'Buzz' in their place; that is, to say 'Buzz' at ev-

ery seventh point in the sequence, at every seventh number in each group of ten, and upon all ten numbers in each seventh group of ten, in place of the arbitrary terms 'seven, fourteen, seventeen' and so forth. In this way, it could *not* err. It would have no choice *but* to type 'Buzz' at the proper moments, since only the word 'Buzz' would be available to its selector-circuits."

"Professor Hunnecker," a reporter interrupted me.

I bestowed upon the man my most benign, just-short-of-patronizing smile, Amicable Wisdom patiently awaiting exploitation for the masses. I gave no nod, but he seemed to sense one from my mien, and went on, "—are you saying that a human mind is inferior to your electronic brain's?" His ballpoint hovered hopefully over his pad of paper.

Apparently, my whilom explanation of the difference between a "brain" and a "mind" had not registered with the man. I toyed for a moment with the notion of reminding him as sardonically as possible of this lapse, but then recalled my enforced congeniality and subdued the impulse. "Not precisely," I answered with a smile. "What I am doing is simply showing you that the thing which differentiates the two is the fact that a person can choose *wrongly*. Nothing this machine can do—and I include multiplying by ten-digit numbers instantaneously—could not be performed as well, or better, by a person, if his mind were not 'cluttered' with drives, random memories floating unbidden across the consciousness, interruption by exterior sounds (which even if consciously unnoted would trigger and involve the subconscious), a bad taste in the mouth—or a *good* taste, for that matter—an itchy underarm . . . A billion distractions which, even consciously unobserved, would clog the functioning of the brain. By long years of training in concentration, a man *can* learn to duplicate the feats of this machine, of course. But to do so, he gradually becomes valueless as a *man*. He is nothing more than an incarnate computer."

"You mean he's a kind of machine, himself?"

"In a sense, yes," I said, noting with brief annoyance that my pipe had gone out. "What he has actually become is—" I let a twinkle steal prematurely into my eye, so that the slow-witted group could gather their laugh-forces in readiness, "—a crashing bore." I let their appreciative chuckle fade, then went on to particularize, "He would have the sort of mind that would *analyze* incoming data; if you asked 'Why does the chicken cross the road?' he would ponder for a second, then inform you that in order to respond to your query he would need the qualifying in-

formation regarding the age and size of the chicken, season of the year, width of the road, annual amount of traffic, and the like, before giving you a possible motivation for the fowl's abrupt shift of roadside-related juxtaposition. As I said, a crashing bore."

"Then the machine has no sense of humor?" demanded a tight-suited woman with unattractive features arranged into a look of wistful disappointment and sympathy.

"It *cannot* have!" I said, probably a bit testily, so slow were they to grasp the simplest concepts. "Humor is dependent upon the mind's recognizing an incongruity. A man slipping on a banana peel is laughable only because a vertical biped has been forced into an unwillingly horizontal position. My machine, in the adjoining chamber to this office, cannot countenance such a thing as an incongruity; you cannot program something built to be forever correct with the additional information that things are—on certain occasions—*in*correct. To a man, a child's hopeful statement that one plus one equalled three would be amusing; to my machine, one plus one equalling three is inadmissible. Were I to feed this outrageous arithmetical solution into the card-slot, the machine would not laugh. It would simply spew the card right out again. It cannot—as can man—'know' facts both true and false; it cannot learn 'There are no such things as fairies', for instance, because if the 'things' do not exist, then the word 'fairies' is incomprehensible to the machine. That is, it cannot conceive of having a term for something that is not."

"What," asked the woman, "is the *reason* for this spewing-out of the card, Professor Hunnecker?" She hastened to add, seeing the scowl I could not quite forefend, "That is, I fully understand the psychology of the *examples* you gave—the one-plus-one-is-three, and the no-fairies—but what I wanted to know were the *electronic* reasons."

"Oh, I see," I said, smiling once more. "It's quite simple: There would be no *room*, as it were, within the machine's circuits to *overlay* this new information atop those stating the unequivocal opposite. If it knows 'one plus one equals two', for instance, any other notion is summarily rejected."

"But," the woman frowned, "isn't that precisely what a *man* does, when given the false information? I mean, *his* mind knows 'two' is the proper answer, so when he hears 'three', doesn't he do—in a physical way—what the machine does?"

I realized, after a long moment, that I was staring at the woman. Staring stupidly. "I beg your pardon?" I said.

"It just seems to me—of course,

I'm no electronics expert, but—It does seem to me that whether a man's mind causes his vocal apparatus to say 'Ha-ha!' or the machine causes its card-slot to eject the coded card, that the reactions were comparable. The machine *has* no vocal apparatus, so it—well—'makes do' . . ." Her voice trailed off into a dismal little silence of acute embarrassment, whether at her *own* theorizing or not, I could not be certain.

"Are you intimating," I said, feeling a funny crinkling about my eyes, and knowing some of the color had drained from my face, "that perhaps my machine, after all, *has* a sense of humor?! . . . But that would imply it had a *mind*, Madam!" I shook my head with unwonted violence. "It does not. It cannot. It is a mere *brain*, the tool—the instrument—of that force we call the 'mind'. It has not that prime requisite for true intelligence, self-awareness!"

"But it *must* have," averred the woman, looking almost attractive in her pretty confusion and unease. "If it did not, how would it know that it *had* those one-plus-one-equal-two circuits into which the coded one-plus-one-equal-three programming would not—uh—*fit?*"

I did not reply at once. Then, I did not reply at all. Instead, I glanced—over-elaborately, I fear—at my watch, and announced, "Where has the time gone to!?" I forced a sigh through my lips, and said, "I'm sorry, but I must return to my work. I thank you all for your interest." And, so saying, I turned away quickly and went from my office through the door to the brain-chamber, leaving the open-mouthed reporters to fold their note-pads and file slowly out, puzzled and dissatisfied at the bothersome speculation that woman had aroused. Speculation to which I had not replied.

To which—until I checked—I *could* not reply.

The chamber behind my office is tall and broad, in order to house the massive construction of the brain. I stood before the metal face of the brain, the towering, featureless face, simply gazing at it a long time—or perhaps only a minute or two—I cannot clearly remember. Then I sat at the low table before it and typed the question, "What is the fifth power of four raised by the fourth power of five and divided by the third power of six?" The question appeared upon the sheet before me; the coded card appeared in a slot at the typewriter's base. I put the card into the orifice of the machine and depressed the switch that would start it functioning. The relays clicked, the machine's innards tootled and piped and pinged, and then the typewriter—geared to translate the machine's coded responses automatically—typed its reply:

"Can I have a pencil and paper?"

Hunnecker said, "I left the chamber then. But I returned shortly thereafter with a large satchel containing explosives, caps and wires, a timer, and a tiny detonator. I knew where the charges would do the damage, and I placed them carefully.

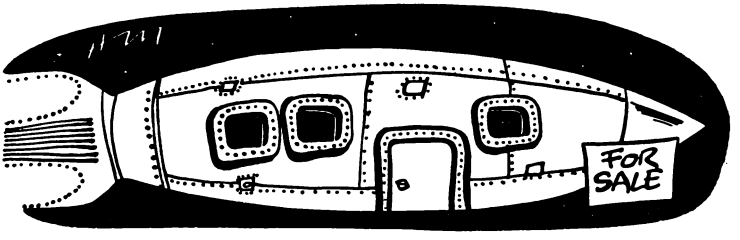
"And then I blew the machine into smoking bits. And then I came here."

The man at the desk said, "And how many people, to your knowledge, were still inside the building at the time?"

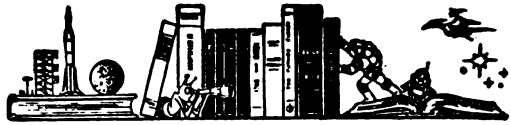
Said Hunnecker, "I made quite sure of that . . . There was no one and nothing inside the building at the time . . . but the machine."

The other man blinked. His mouth did one or two silent little things. His hands twitched towards the telephone, his eyebrows moved. Then he recovered command. "Well, now . . . uh . . . professor," he said gently. "You're not in the right department here. This is the Homicide Division. Did you know that?"

Hunnecker sighed, slightly smiled. "Oh, yes," he said, on a rising inflection. "Oh, yes . . ."



BOOKS



A CENTURY OF GREAT SCIENCE FICTION NOVELS, Damon Knight, ed., Delacorte Press, $4.95

"This collection attempts to show the origins and development of good science fiction over the past century," says the editor. Good show. Centuries are shorter than they used to be—this one covers 78 years by my handy pocket abacus. *N'importe.* A shocking number of people have never actually read Robert Louis Stevenson's STRANGE CASE OF DR. JEKYLL AND MR. HYDE, or Herbert George Wells's THE INVISIBLE MAN, relying on the moom-pitcher versions. *Shame!* You must read them at once, do you hear? And if you haven't read them lately, then read them again. Like, in this collection. Each novel is preceded by a short (very short) essay on its author.

Anyone would say that Wells was the sounder scientist and that Stevenson was no scientist at all, but a romantic. Yet THE INVISIBLE MAN, though possibly the better novel of the two, remains an unfulfilled—though quite logical—romance (perhaps anti-romance is the better word: it utterly demolishes the notion that invisibility is desirable); and DR. JEKYLL AND MR. HYDE seems likelier and truer with each new advance in psychology and chemotherapy: " . . . *man is not truly one but truly two* [. . .] *the state of my knowledge does not pass beyond that point. Others . . . will outstrip me on the same lines; and . . . man will be ultimately known for a mere polity of multifarious, incongruous and independent denizens.*

THE ABSOLUTE AT LARGE, by Karel Capek (R.U.R. and WAR WITH THE NEWTS), does not read easy to start with. I always am uneasy when people with names like Hrdlika and Przvan are described in translation as "Mr.", anyway. But the idea is novel and worthy of Anatole France. Man named Marek invents a device which derives atomic energy from coal (or anything else), doesn't merely *split* the atom, but "uses it up completely." With the result that God, contained in as well as containing all matter, is *"hurl[ed] as a byproduct into the world"* and *"loos[ed] upon the earth like a*

flood." Great gimmick and there are some amusing things in the book. But mostly the possibilities are not developed to anywhere near where they should be. Tsk.

GULF is pretty good Heinlein. It starts off with a Chase, A Capture, and an Escape, all slam-bang razzle-dazzle sis-boom-bah, in the marvelously convincing Heinleinesque future—and then—and then—just as we're on the edges of our seats and screaming, Captain Heinlein swallows one of Dr. Jekyll's peerless powders, and then Professor Heinlein takes over. His description of the supermen among us is plausible, but the story never regains its original pace or hold. Tsk, tsk.

In E FOR EFFORT, T. L. Sherred gives us a long, hard look at a favorite SF notion, the device which is a double-edged sword. In this case, a sort of intertemporal interspacial viewoscope. I'm hard put to it to say much about this story. I know it was a sensation when it came out, c. 17 years ago, though I missed it; I give Mr. Sherred full marks for sincerity; it reads well enough . . . but it leaves me tepid. And I am perhaps too close to Richard McKenna's HUNTER, COME HOME, having bought it for this Magazine, to do it justice. It deals with the attempt of a hunt-centered culture to turn a planet into one great shooting area for the essential rite of passage into manhood. The floro-fauna or fauno-flora of the planet is not only different from any other ecological system, it fights back, too. I think that those who haven't read it will be pleased to have done so. Shamefully, no credits are given to the designer of this collection's jacket, which is not bad.

GREEN MEDICINE, Margaret B. Kreig, Rand McNally, $5.95

Dr. Claude Lévi-Strauss, whose TRISTES TROPIQUES we reviewed here earlier, mentioned that drug companies sometimes assisted anthropologizing expeditions in return for tips on native drugs; what they did with them, the anthropologists seldom learned because "drug companies are a close-mouthed lot." Well, Mrs. Krieg has succeeded in opening their mouths. There's material here, in this book on the search for new botanicals, for a thousand SF stories. How about this, just to start with: *"Bacteria have been brought back to life after having been sealed in Siberian salt deposits for 650,000,000 years; when they were injected into mice, the animals died of generalized bacterial infection within twelve hours."* Or, *"plant tissue culture"*—don't bother cultivating the whole plant, just the desired tissues in a laboratory soup. "The results," says the author, "can border upon science fiction."

Ironic that "some of the best leads so far have been gleaned from Stone Age peoples" and are now being investigated for use in space travel! No short review could cover the infinity of fascinating things touched upon by this book —the new science of marine pharmacology, hallucogenic drugs, "primitive peoples still living in close association with the plant world," little-known learnings such as ethnobotany, paleoethnobotany [*won't* some workers in these fields please try their hands at Science Fiction!?], and pharmacognosy, psychic energizers, nematodes (microscopic worms) as a cause in the decline of the Mayas, the quest for quinine and its centuries-long obstacles, the use of IBM machines in assaying 15,000 species of plants for alkaloids, and on and on.

The author has written a lot for magazines like *This Week, Reader's Digest, Good Housekeeping,* and so on, and her prose often shows it. Nevertheless, a book well-worth reading, infinitely hopeful, infinitely stimulating.

WHEN THE WHITES WENT, **Robert Bateman,** Walker, $3.95

Well, here is this year's British-type British SF novel, i.e. an extrapolation on a single-stroke catastrophe. This time it doesn't get hotter or colder or wetter or dryer or any of that; no, we've had a plague again . . . and this one affects, fatally, everybody but "pure Negroes." The action takes place in Mr. Bateman's Britain, where there are about 100,000 Negroes, only. Such a small number of survivors would have a damned difficult time of it keeping everything from sliding, anyway; *noch der tsu,* when the number of scientists, engineers, technicians, people experienced in government, etc., is as small as it is among Negroes. I'll lay my bottom (or, for that matter, my top) dollar that the author is no Negro. For one reason, he seems to have no better notion of the many types of Negro-spoken English than to create one uniform dialect consisting of dropped *g*s from present participles and dropped *u*s from second person pronouns. I've spoken with North American, South American, West Indian, and African Negroes—never met one that said, "Yo'." And his characters are all conventional fiction types, too. The story is improved neither by the introduction of Dr. Martin Luther King as "the Rev. Wesley Baron" or by two surviving white men who pop up from one of those convenient mines or caves. The book is not entirely without interest, but it seems almost entirely without merit.

—AVRAM DAVIDSON

NIGHT OF MASKS, *Andre Norton*, Harcourt, Brace & World, $3.25

Andre Norton has several Basic Plots which have served her well in recent years. In this, her latest juvenile, we have Plot A: an orphaned boy in a "Dipple"—a camptown for the displaced of the last interstellar war—who, Horatio-Alger-like, rises from his humble, if not hopeless, surroundings to win a better place for himself in society.

As with most of the other books using this plot, the society—only lightly sketched—is an unpleasant mercantile-feudal sort with the merchants, traders and statesmen occupying the upper rungs, and a variety of less appealing and servile positions ladled out to the masses below. To one side of all this exists the Space Patrol and its antithesis, the Thieves Guild.

The youthful protagonists of these books are usually—by no fault of their own—on the wrong side of the tracks when the book opens. In this story Nik Kolherne, his face repulsively scarred by a spaceship wreck, is offered a new face and a chance to escape the Dipple if, in return, he will decoy the son of an important official away from his heavily guarded refuge.

Nik will do "anything!" for a new face, and the face he's given turns out to be that of a fantasy hero born in the mind of Vandy, the boy he is to lure from safety.

The initial confrontation between the two is skipped over by Miss Norton, an irritating habit she sometimes exhibits in letting crucial scenes occur off-stage. But it is just past this point that the true story opens, for Plot A is concerned with the development of the protagonist under hazardous and adventurous conditions.

None of Miss Norton's Plot A books have been memorable, and this one is no exception. It is among neither her best nor her worst. It is more than adequate as a juvenile, and remains essentially a rousing adventure story as good as most for those who enjoy them.

—TED WHITE

PUBLICATION NOTED

Anderson, Poul. *Three Worlds to Conquer*. Pyramid. 50¢.
de Camp, L. Sprague. *Elephant*. Pyramid. 75¢. Non-fiction, illustrated.
Einstein, Charles. *The Day New York Went Dry*. Gold Medal. 40¢.
Farmer, Philip Jose. *Tongues of the Moon*. Pyramid. 50¢.
Ferman, Joseph W., ed. *No Limits*. Ballantine. 50¢. Stories from F&SF's one-time sister magazine, *Venture*.
Hamilton, Edmond. *Battle For The Stars*. Paperback Library. 50¢.

Trying to write biographical data for a pseudonymous collaboration poses certain difficulties, and authors of this one have come up with nothing more helpful than "Lewis J. A. Adams is a man of many parts. He has served in both the Army and the Navy, and is currently working on his second B.A." It is difficult to say, in these moiling, toiling days of changing relationships between the American "races" whether the sounds we hear are the trumpets proclaiming "the year of Jubilo" or those of the "alarm-bell in the night." Or both. Or perhaps neither. Certain seasons seem appointed for change, and when the hour comes, for better or worse or unclassifiably different, no man or men can hold them back. This story will probably shock you.

DARK CONCEPTION

by Louis J. A. Adams

FOUR BLOCKS DOWN THE STREET, opposite the courthouse with the Confederate monument and the stack of cannonballs on the lawn, Grove Avenue was a row of antiseptic, air-conditioned storefronts. The windows looked like magazine ads. White faces moved here, in the stores, in the courthouse—the black faces were hidden, in kitchens, in storerooms, or invisibly mowing the courthouse lawn. It was the way things were.

Four blocks in Mississippi can be a long way. On the other side of the overpass, Grove Avenue was peeling paint, chipped brick, and ten-year-old cars, a smashed bottle in the gutter, stores pinched together, two storefront churches. It was a darker world—here there were no white faces—and even the sun seemed duller and hotter. It was the way things were.

He looked out the window at the street below for a long time. He'd come a long way from New York, in years as well as distance. Sometimes he wondered why he'd come at all.

Doctor William Roosevelt Brown turned away from the window that mirrored the Bington scene below feeling the sense of loss and futility that had gripped him for a long time. He looked

around his neat, out-of-date examining room and brought his mind back to present time.

His nurse came in the door. She was a thin, brown girl, much lighter than his own color and she had worked for him for about a year. She was attractive in her white uniform and Brown had cat and moused her for a long time without real enthusiasm. He liked her and once he had kissed her in the darkness of the drug room, but they had broken quickly away, and that was all. Now it was strictly business.

"Eli Cadwell," she said.

"In the waiting room?" he asked, surprised.

She nodded.

Cadwell was among the people Brown had counted as least likely to show up in his office, although once they'd been friends. But that had been long ago, before Brown had gone north to med school, when Cadwell had been able to think of something other than his festering hate.

"He brought his wife in," the nurse said.

"Miss Emmet," he said formally, "are you telling me that Eli Cadwell is married?"

She nodded. "Since last month. I thought you knew. Mary Lou Shipman."

Brown picked at his neat mustache. "She's about fifteen, Eli's over fifty," he said with irritation.

"Yeah."

"All right—show them in."

At the door, Miss Emmet looked back, unsmiling. "She's pregnant, Doctor."

She ushered them in. Cadwell came first, then the girl. Cadwell's eyes darted here and there about the office, never resting. He was a lean man and once he had been tall, but now his height seemed an illusion and he walked bent, his body queerly out of focus. A group of white men, drunk on raw moonshine, larking, had caught him stealing chickens. They had lashed him between the front bumpers of two cars and backed away gently until his bones and joints had torn and cracked. That had been in the next county and a long time ago, before Brown had come here. Mostly they didn't do that sort of thing any more. They had other ways of dealing with you.

The girl, Mary Lou, was obviously pregnant. She was tiny and low breasted, her hands nervously carried over the hump of her stomach. She watched her husband like a silent wren and her eyes were fearful when she looked elsewhere in the room, more fearful when she looked at him.

"You want me to look at her, Eli?"

Cadwell nodded. "Just look," he said.

Brown pointed at his nurse, who waited at the door. "Go with her, Mary Lou. She'll show you what to do."

She looked at her husband, awaiting his nod. When it came she shuffled, head down, following Miss Emmet.

Cadwell limped around the room. Brown watched him study the signed picture of Thurgood Marshall and the Brotherhood of Man framed certificate.

"Is that baby yours?" he asked.

Cadwell turned back and his cold eyes came up and he smiled sourily. "You're a smart son of a bitch, Brown. You figure it out." Then his eyes went down and a look of secret triumph came in his smile. "You jus' examine her, *Doctor*." He sat down in a chair and got out a worn bible "I'll read me a little of this hogwash while you're doing it."

"White men, black men, and God," Brown said, feeling the tiredness come. "All right, Eli."

He went into his tiny obstetrics room and examined the girl. She lay passively, without curiousity, under his hands.

When he was done he said: "Stay here with the nurse, Mary Lou. I'll be back in a few minutes." He closed the connecting door behind him.

"Eli," he said, "did you know your wife's a virgin?"

The old man nodded crookedly. "I want a paper sayin' it. I mean to get me papers from fo', maybe five doctors saying it."

"What for?"

Now the triumph came lashing through. "For the newspapers, man. To let 'em know jus' the way things is. I mean to let all them white bastards know that a virgin pregnant and she a black girl. They say here," he said pointing at the bible, "that it happen before, but they lie all the time with their Jesus Crise this and Jesus Crise that and they put us down with it and spit on us." His eyes were crafty and unsane. "Now I got us a God and now we rise up and grind them to blood." He pulped the world together by grinding his hands savagely. "And we'll kill all the rest, all of the ones that don't stay with us."

"That would mean me," Brown said.

"Sure, you." His lips made a vicious parody of a smile. "Bad as them. You try to live with them. You one of them tries to get us to march to the courthouse. You fooled some of them, but not me. All them big people you got here in town. What good that do? March a few times and they stick you in the gut with a club or hose you off and you noplace—nothing. You can't live with them—you got to kill . . ."

Brown held up his hands. "You're wrong, Eli."

"Don' you call me Eli! Call me Mr. Cadwell or don' call me. You're no white man to call me Eli or Boy." He moved up close and for the first time Doctor Brown could smell the corn whiskey on his

breath, sour and strong. "I'm not wrong."

Brown shook his head and retreated behind his desk out of breathshot. He looked down the titles of his books, then took one down and thumbed until he found the right place.

"Here! Crumm, Weizmann and Evans, 'Heredity, Eugenics, and Human Biology.' See here—'Parthenogenesis.' Now read what it says. It says it's possible for a virgin to have a baby. It's extremely rare, but it's possible." He thrust the book at Cadwell. "Read!"

Cadwell took the book suspiciously. In a moment he thumped it with a finger. "I don' make out these words." But he went on reading.

After awhile he looked up. "It say a virgin can only have a girl baby, not a boy baby."

"Yes."

"Well, you been a big Jesus Chrise man. How you explain that?" Cadwell challenged triumphantly.

Doctor Brown kept the self-taught carefulness in his voice. You learned to be careful when you were a negro doctor in Bington.

"I'm not trying to explain Jesus. I didn't examine Jesus or his Mother. I'm only saying that your wife is pregnant with a fully intact and inelastic hymen and that medical science says it's possible, but the child born in such circumstances has to be a female."

"Why?" Cadwell almost shouted.

Brown controlled his exasperation. He said: "Every woman is a female because she has two X chromosomes. The male has one X and one Y. If the man gives an X, during intercourse, the woman gives another X, which is all she has, and the baby is a girl. If the man gives a Y the woman still gives an X and the baby is a boy. But a woman who conceives without a man has nothing but X chromosomes and so the baby *has* to be a girl."

"You mean it ain't a miracle?" Cadwell said uncertainly, partially beaten down by the flood of words.

"That's right."

Cadwell looked away and when he looked back there was a sign of craftiness in his eyes. He said slowly, as if to himself: "But mos' people, they don' know that. They think it's a miracle. It still mean somethin'."

"Not for what you want it for. You start giving stories out to the newspapers and it will come out just like another freak story. You tell anything else then maybe you'll get a few people lathered up and maybe some killed."

Cadwell said, very quietly: "They's more of us in this state than they is of them."

"Sure," Brown said desperately, "but you haven't got the answer to it there. Hate and bloodshed is no

solution to hate and bloodshed. All of the things worth having are coming for us. All you'll do is set it back."

Cadwell's face tensed with lines of bitterness. "I don' want what you want, man. I want what they got and for them to be like me now. I want to lead me a lynch mob and hang someone who look at one of *our* girls. I want to rent me some of my land to one of them and let them get one payment behind. I want them to try to sen' they kids to our school. I want 'em to give me back myself like I was before, when I didn't hurt so bad that I better off dead."

He held out his hands so Brown could see the pink, calloused palms. "I do it with these, Doctor. Now I want a paper from you sayin' nothin' but the hones' truth. I want you to write me a paper and say that you look at Mary Lou and that she a virgin and pregnant. You a black man and I'm a black man. You give that to me—that paper."

Brown looked at the old man steadily for a moment and then he said evenly: "I want to finish my examination. I'll be back."

The old man smiled and made his eyes go sleepy. "I'll wait," he said. He sat his crooked body in a chair and Brown felt the terrible weight of those eyes until he closed the door.

Brown looked down at the supine woman. "All right, Mary Lou. Just lay still and relax." He crossed over to the sideboard and picked up a sterile instrument pack lying there. Miss Emmet, the nurse, watched him with curious eyes.

"What you goin' to do?" Mary Lou asked, her eyes big and afraid.

"I won't hurt you," he said. He placed the towel around her legs and, with surgical care, slit the hymen.

She gave a cry of outrage and surprise and Brown heard the door to the room open with a whoosh of air.

"What you do to Mary Lou?" Eli Cadwell demanded.

Brown turned on the water tap at the sink and calmly scrubbed his hands. He watched the girl sit up on the table. There was a thin, red line of blood on the towel.

Cadwell saw it also. With a howl of rage that was also a sound of pain he stepped forward to the sink and swung his fist at Brown. Brown saw it coming, and tried to move away. He went down hard.

"Get out of here," he heard Miss Emmet say. "I'm going to call the police. You get out of here!"

Cadwell ignored her and looked down at Brown. He said: "Maybe I take that little knife and cut you so you never bother no one again. Maybe that the answer fo' you. But I think I let you stay like you is. You know it, too. Maybe you a doctor, but when the white boys see you then you jus' another nig-

ger." Without turning his head he said to the sobbing, frightened girl on the table, "Mary Lou, you get your clothes on."

Brown came up to a sitting position and the old man kicked him hard. Brown felt the breath go out of his lungs and he slid back down, the hurt almost gone now in semi-consciousness.

He heard the old man say: "You an Uncle Tom. You eat their spit and you take their learnin'. White men wrote them books out there. White men can't change this baby. When this baby born I'm goin' to raise him up to hate the way I hate. They's goin' to be a line that baby draw someday and you goin' to be on the wrong side. Boy baby or girl baby—hate like I hate. We see what this virgin's baby be when it grow up."

He took Mary Lou's hand in his and they went on out the door.

When they were gone Brown let Miss Emmet help him to his feet. He looked at himself in the mirror. There was a large welt on his chin and his ribs were sore, but he felt no worse than he had when he had been hit by the firehose in the march on the courthouse. He would not allow Miss Emmet to call the police. He was not sure they would come anyway.

He sat down in his chair. Despite the pain in his face and chest he didn't feel bad, not bad at all.

Through the fall Brown heard almost nothing of Eli Cadwell. Sometimes on his rounds, he would hear a little of him as he heard of others, but the old man seemed peaceful and appeared to be working his tiny area of rented ground. It wasn't until the middle of December that he really heard anything of interest. One of his patients told him that Mary Lou had had her baby.

When they were back in the car after seeing that patient Brown told Miss Emmet, "I think we'd better go past Eli Cadwell's."

She shook her head. "Don't go. You'll only get in trouble."

He looked at her. "You want me to take you back to town before I go over?"

After a minute she said, "No" in a suddenly tired voice.

"Now that the little girl is here I want to try to help," he explained. "Maybe he'll let me check them over. I'd give a lot if some of these people would give up their midwives and come to me. There'd be fewer to bury."

The house was a small cabin, old and unpainted. On behind there was an outhouse. Both were in the state that comes shortly before total collapse. Brown pulled his car up into the rutted, red dirt drive and walked through the fireweed that winter had not quite killed.

No one answered his knock. He started back for the car, oddly relieved. He saw Miss Emmet watch-

ing him with frightened eyes.

A voice called to him from down the road and he recognized Mrs. Jackman. She was stout and old and she wore a tired red sweater over her dress. She waddled towards him.

"They gone off," she said breathlessly when she was close enough.

He went on up to her. She lived down the road and she was a part time midwife. He looked at her hands, the nails encrusted with dirt no soap would reach, and sighed to himself.

"Where?" he asked.

"I don' know," she said. "Eli never talk much. After the baby born, Eli pack that old car and they all leave."

"How soon after the baby was born?"

"Three, fo' days," she said. "I tol' him that was too soon, but he don't listen. He give me his mule fo' ten dollahs and helpin' with the baby like I done. He sold his tools, too. I don' think he comin' back."

"Thank you, Mrs. Jackman," Brown said and started to turn.

"Hol' on there," she said. "I spose to pass on a message to you."

"To me?" Brown said in surprise.

"Yeah, he said to tell you they named the boy Elijah after his pa."

Slowly Brown said, "It was a boy . . ."

"Oh, yeah. Real buster of a boy."

With her message delivered, she left and Brown watched her walk back down the road to her own place. He stood there for a minute just thinking and then he went back to the car.

"I feel like a drink," he said. "Doris, do you feel like having a drink?"

She looked at him. "All right," she said.

There wasn't any place to hide, really. In twenty years he might be dead, anyway. He thought about it for a minute, and then he reached across and opened the glove compartment. He took out a bottle and some Dixie cups.

"Merry Christmas," he said.

"It isn't Christmas yet," Doris said.

"Oh, yes," he said. "Oh, yes."

From Hawaii, where its author now lives, comes the story of Rybac, who lived—if that is not too strong a verb—chiefly for Anderson, although he might have said that he lived chiefly because of Anderson . . . no mere chopping of words, either. And at the bottom of the tideless, dolorous inland sea, the last chapter of the saga was played out . . .

ONE MAN'S DREAM

by Sydney Van Scyoc

IN HIS TANK, RYBAK SLEPT. HIS hands, spotted with decades, softened by maintenance fluid, bobbed folded under his head. His hair rose in grey sheafs and his legs, knobbled and veined, ebbed under his shrunken rib cage. His beard flowed.

He was old and dying.

He was yet unborn.

Then, in the single sparsely lit chamber of his mind that still held consciousness, Anderson was loping up the marble staircase, dark eyes piercing, long and melancholy face taut.

At the top of the staircase, Lyrica screamed. Her hands crept up her breasts, up her throat, over the terrified orifice of her mouth. She backed, groping the rail.

The monster snarled from the darkened doorway. Grunting, it padded, flowed and waddled, slavered, groaned and heaved. It wanted unspeakable things of her, and it would have them.

Except that Anderson had leapt the top step and was thrusting Lyrica behind, flying with his blade bared and thirsting. His feet made swift patterns on the marbled floor. He thrust, retreated, teased. His eyes gauged.

He feinted, scampered.

Lunged.

Skewered.

The monster staggered, bellowed once, and bloodied the marble with its carcass. Its claws pawed feebly, then its tongue lolled.

Lyrica fell to Anderson's shirt. Her hair flowed down his chest, strands of golden lava, burning. He touched it, gently, and his dark eyes glowed.

But then he was at the bottom

of the staircase while she sobbed at the top. He was through the marbled hallway, flickering, and out the door into nothingness.

Somebody stood by Rybak's tank.

"Do you think he can hear?" The girl's giggle filtered through the long, fluid-dimmed tank room. She wore plaid kicker straps attached to a metal waistband and a white bosom snugger. She was very young. "Daddy says the doctors think some of them know what's going on, sort of. Like sometimes you hear in your sleep. Like a part of their minds won't stop even though they're supposed to."

The boy grunted and twitched one shoulder. He was a pimpled wand, a mop of hair. "Makes me sick. Like a bunch of blind fish, or those kids in bottles the bio prof keeps. They oughta throw them out."

The girl's giggle died nervously. "I thought you'd like it, Teffry. Otherwise I wouldn't have pestered for the passes. Daddy says they can keep them as much as two hundred years, maybe longer with the new maintenance fluid."

Grunt. Twitch. An offended, black-eyed glare into Rybak's tank.

"Well, it wasn't easy getting passes, even if Daddy is assistant director," she said, hurt. "He says if anything was to happen to the wrong one of the tanks—"

"The wrong one, huh?" He snorted. "Politics!"

The girl frowned earnestly. "Well, one of the ones with relatives still living Just think how they hate it. A man makes lots of money and then when he's dying, instead of leaving it to his relatives, like they think he will, he has himself tanked. At least until the money runs out or somebody finds a cure for whatever was wrong with him. A lot of them have been cured out already, in just thirty-two years. But Daddy says if anything was to happen to the wrong tank, the relatives would sue the hide off. He says—"

"Shove Daddy." The boy shuffled, glaring.

"But Teff—"

Abandoned, Rybak bobbed on a tide of disturbing words, words that had penetrated even as far as his one remaining chamber of consciousness: until the money runs out.

Where was Anderson?

Did Anderson know about the money?

Was it fair to Anderson to pollute his chamber with thoughts of money?

Even as he wondered, dimly, the chamber cleared and Anderson was backing across the landing plain with Lyrica behind his outflung arm. The aliens advanced, golden garments fluttering. Jeweled eyes glowed. Antennae fluttered and stingers twitched. Lyrica made no sound but her tumbled hair gleamed eloquently, fearfully.

The plain spread flat to the horistence had been enough, his flick-crouched disabled behind alien backs. Lyrica shot a worried glance. "More," she gasped.

He continued to back, crouching slightly. "Where? How many?" His landing suit irridesced in the green sun.

"From our left. I—I can't count them." Her breath came in a sob.

He glanced to the new party. They advanced slowly.

"From our right!" she cried.

He turned to the third party. That was when he saw the fourth advancing from the rear.

With a convulsive cry, Lyrica flung her hair over her face. Anderson's arm encompassed her shoulders. He wielded his blaster, but it could not protect them from all the aliens.

Relentlessly the insects advanced. The first party formed a quarter circle and the others, when they drew near, joined. Stingers rattled; the circle tightened.

Anderson hid Lyrica's burning head and brandished the blaster. Four leaders stepped into the circle from four directions. Their stingers twitched as they crouched for the kill.

Anderson raised the blaster, knowing it was hopeless.

But then, from the green and golden sky—

"Is this the one?" The director glared into Rybak's tank. "How long has he soaked?"

The subordinate consulted his records. "Three years, five weeks."

"His funds expire when?" He snapped pudgy fingers.

"Tomorrow. To the penny."

The director scowled. "Three years? I thought he was in for aging and general deterioration too extensive for practical replacements in the foreseeable future." He rapped out the formula impatiently.

"He is, sir. In twenty or thirty years we may have the proper miniaturizations to put him back in working order. But not sooner."

"He knew that when he contracted the tank?"

"Of course, sir."

The director glowered and rumbled. "Then what the nutrient did he hope to gain, man? What's he doing in there in the first place?"

The subordinate blinked nervously. "Sir, I don't know."

The director bent and stared full into Rybak's sluggish face distastefully. "Relatives?"

"Yes, sir. A son. But—"

The director straightened. "Get him."

As their footsteps faded, Rybak tried to turn in his bath of maintenance fluid. But only his beard stirred, and his wealth of long grey hair.

His only wealth.

Groping, he tried to form the three precious syllables that were

Anderson. Always Anderson's existence had been enough, his flickering and heroic image lighting too many days otherwise too grey. Always Rybak had only wanted to provide an environment for Anderson, to watch as Anderson acted out his life in his own flamboyant style, untouched by what Rybak's son called reality. But now he tried to call, and it was like running underwater. Impossible.

Impossible for anyone but Anderson, whose long legs took him in leaps across the sea floor. Clouds of sea dust rose behind him. Fishes of all colors fled wild-eyed.

He paused atop a pinnacle and saw that Lyrica struggled behind, long hair flowing. He leapt from the peak and split water to her. He took her hands and again began the leaping journey.

When the treasure ship lay ahead, they found it patrolled by a squad of hammerhead sharks who cruised in endless circuits. A scar on each ugly head told the story of human intervention. Intelligence boosters had been surgically implanted. Each shark was at least as intelligent as a human moron. And, if approached properly, as docile.

Anderson had ducked behind a promontory. Now he tore open his special pack and shook out the long black garments it contained. He floated one set to Lyrica. "Put them on," he said with his hands.

She held them before her questioningly. "Why? What are they?"

"This is a new world. But the old faith has come, as always, and we will travel under its cloak." He helped her bind her hair, and when they swam forward they were Roman Catholic priest and nun in underwater habiliment and gear. The hammerheads tilted their dark bodies in reverence.

They were over the side of the ship and into the treasure hold.

"Oh, Anderson, surely this will be enough to save him." She made golden cascades with her fingers. "How will we get it all out?"

But Anderson was flickering in the murk, fading. Voices murmured outside Rybak's tank.

"He used to tell me about Anderson when I was a kid, about his adventures and the things he did," mused the not-so-young man who stood before the tank. "At first I thought they were just stories he made. But later I could see he believed them himself. Oh, he didn't think he was Anderson, it wasn't that. But he thought Anderson was real and really there. He would do anything to keep from seeing he wasn't. Part of him was adjusting gauges and tempering the flow of nutrients to the hydroponic tanks—we had a small farm, his father and his before him were dirt farmers—but the rest of him was off following Anderson on Antares Three or someplace. Anderson was more real than I was, or my mother, the farm, or any-

thing else. Anderson was all that really mattered." His voice was touched with bitterness.

The director grunted impatiently. "May we assume then that you haven't the means of continuing your father's entankment? You realize, of course, that disentankment means immediate death unless preventive measures are taken. As of course they won't be in this case, his funds having expired."

Rybak's son shoved blunted hands into the pockets of his tired suit. "I always helped work the tank sheds, even after Netta and I started our own family. I was paid a small salary and when he couldn't work anymore, I took over completely. It didn't matter that I wasn't paid in proportion to the work I did. We lived in—my mother had died, Netta kept the house and cooked—and I already thought of the farm, the benches and vats, as my own and my son's."

He shrugged. "But when he learned he couldn't live, without telling me he sold the house and the grounds and the equipment so he could be tanked. When I learned, I told him he had sold us out for a dream, a worthless one at that. I didn't mince, no. But he went into coma and had to be taken. And, well, it isn't easy to start over at forty, not with a wife, three children and nothing else but your hands." His low, dispassionate voice grated. "No, I wouldn't pay to keep him in there even if I could."

The director frowned, nodding thoughtfully. "I fully understand. However, there is one thing, just to satisfy my own curiosity. Why did your father choose entankment in the first place? He was warned that because his problem was severe aging and overall degeneration, his funds would not be sufficient to preserve him until wholesale replacements would be practicable."

Rybak stared glumly. "It was Anderson."

"Anderson? The dream man?"

"My father never really accepted responsibility for anyone or anything but Anderson. When the time came, it was Anderson he had to protect from death. Not himself. He had never lived, really, just moved through life without seeing or touching, a matrix for Anderson. If the matrix died—Anderson died."

"But that's nonsense. This Anderson is just a figment—"

Rybak's voice was bitter. "Ah, you haven't heard about his long, melancholy face, about his penetrating dark eyes, about Lyrica, his love. You haven't heard about his having the strength of ten, the cunning of twenty. Over the years, Anderson has become almost as real to me as to my father. The one way I could touch my father was by hating Anderson—and I did and do. I wouldn't mind so much if Anderson had done one useful thing in his lifetime. But my fa-

ther can't even dream constructively." He gave the tank one last bitter glance, turning. "No, if it were permitted, I would pull the plug myself, just for the pleasure of watching his face when he sees I've been right all along."

"But Mr. Rybak—" the director rumbled, scurrying after.

Anderson had never done one useful thing?

The thought seeped into Rybak's single chamber of awareness, milky but crystallizing.

Why, hadn't Anderson saved Lyrica from the castled monster of Sirius Seven? Hadn't he subdued the dog people, slain the golden katydids of Fomalhaut Five? Hadn't he conquered the legions of Caesar himself, when he had gone back in the time tank?

Wasn't he even now gathering treasure that would save Rybak from disentankment? If Rybak's eyes had been capable of tears, his lids would have stung. The first time he had asked anything of Anderson, had Anderson stopped to question? Had Anderson vacillated and hesitated and doubted?

Then why did *he*? Why did he not leave the whole problem in Anderson's capable hands? Why did he not dispel this murky doubt? Anderson could save them both, would save them.

The chamber cleared and became the treasure hold, and Lyrica was tugging Anderson's arm. She pointed to the single porthole.

Two somber priests approached, shuffling over the sea floor.

Anderson spared them a single, penetrating glance. Then he sprang long-limbed to his pouches and funneled golden riches into them.

Anderson would save them. How could he have doubted?

But outside, someone who had approached unnoticed in coveralls said, "This the one?"

"Yeah." And the tank began to tilt and wallow.

"Seaquake!" Anderson leapt and strapped his pouches to his waist. Seizing Lyrica's arm, he shot through the mouth of the hold.

The sea sloshed and slapped.

Somewhere outside there was the squealing protest of unoiled wheels as they carried the heavy tank before them.

Anderson and Lyrica shot into the heaving sea. Fishes fled in circles before them. Behind, the treasure ship cracked, boomed, and broke slowly into an opening crevice.

Together they cleaved the waters.

But the priests had seen, and when Anderson glanced he saw dark shapes hammering in pursuit. He shot ahead with all his strength, which was the strength of ten. But Lyrica bubbled at his ear and he knew the sharks were closing the gap.

Swiftly he surveyed the seascape. With his free hand he

sought under the priestly garb for his knife. With a flick of flippers he soared, with Lyrica, toward a small sheltering protuberance of rock.

"Seems a shame, letting the old guy run down the drain that way," someone said as Rybak felt himself settling toward his slowly bleeding drain. "Like letting him bleed to death, and still the courts say it ain't murder. Well, if I didn't have a wife and kids—"

"Yeah."

Ah, but they couldn't know that there was no question of death. The couldn't know that Anderson had brought his cunning to bear, that already he carried treasure in his pouches. They coudn't know that he would evade the hammerheads, defeat them utterly, and come bearing triumph and life.

But then, they didn't know Anderson anyway.

Anderson had made shelter, thrusting Lyrica behind him.

The hammerheads dispersed circularly. They shimmied and hovered. One lunged.

Anderson slashed. The hammerhead retreated bleeding.

Another lunged.

Anderson slashed again, but still another had come from the rear, and Anderson's air bubbled from his torn hose. He seized the end of the hose to save what little was imprisoned there.

Lyrica's hose had been severed too. Her long, burning hair boiled from her headdress as she struggled. Anderson scowled, and Ryback could read the angry thought from his face: why, when for once he wanted to do something constructive—yes, Rybak was sure even Anderson admitted that now—must it turn into another adventure?

Of course there was no question of failure. Didn't Anderson always succeed? The hammerheads would marshall for the final attack, they would circle, and then—

But already Rybak's mind chamber was clouding. And the hammerheads—ah, they knew they had only to wait, that in minutes Anderson would no longer threaten.

Rybak's inner view was flickering and dim now. Lyrica had taken her first gulp of sea water and was thrashing. And the hammerheads *were* waiting.

"Won't be much longer," someone said outside, glancing at his watch as the last of the maintenance fluid drained from the tank. "This's the part gets me, where they try to breathe and thrash all around."

Rybak's lungs were straining, his body arching. Struggling, he realized there was one way to save himself. He had to take back his body, regain it long enough to tell them: Get my son. Tell him. I'll give up Anderson. I'll let him die. But do whatever it is that will make me breathe again. Help me bring in air.

He would deny Anderson completely. He would spend his days telling his grandchildren of how their father had helped as a boy. He would regain the farm and leave it for them. He would even take flowers, as he never had, to his wife where she lay unmarked. No longer would he betray his family by extending the hospitality of his mind to Anderson. No longer would he give the precious favor of his attention, of his inward focus. It would be as if Anderson had never been.

But even as his consciousness flickered, his inner chamber lighted for the last time and he saw Anderson leaning weakly against the protruding rock with Lyrica struggling at his feet. He saw Anderson's stern dark eyes, his melancholy features which regarded Rybak with disappointment but without condemnation.

Oh, how could he have betrayed Anderson with thoughts of hospitality and favor? Always he had pretended that he had extended favor. But he had known, without admitting, that it was Anderson who had extended instead. It was Anderson who had brought brightness into Rybak's dim life. It was Anderson who had illuminated and focused, Anderson who had given meaning, purpose, almost life itself. It was Anderson who had tolerated Rybak's constant peering attention. It was Anderson who had never rebuffed, who had never misused the power he must have known he had.

Rybak had tried to communicate the wonder of Anderson, to be sure. He had tried to tell his wife. But she had been too busy or too tired, finally too dead. He had tried to tell his son how Anderson had come one day when Rybak, a boy, had walked the winter lane from the schoolbus with Arkansas cotton plain stretching bleak on either side, the house puffing woodsmoke ahead. He had tried to tell how Anderson had kept coming even though Rybak had nothing to offer but his adolescent mind. He had tried to tell the miracles Anderson had brought: the uncondescending companionship; the fire, light and shimmering beauty; the universes; the excitement into a life as grim as an Arkansas winter of dead cotton stalks.

But his son had said that Anderson was a product of imagination and loneliness and adolescent glandular flux, a habit to be broken, an indulgence. (He himself had sometimes wondered, briefly. But it was too much to ask him to give up the only thing he had ever had for the principle of strict realism.) And his son had been jealous. Perhaps rightfully.

Nevertheless he had to save Anderson. He had to gather what life still remained, and he had to put it into those three syllables, Anderson. He had to make them see, with only those syllables, that they

couldn't let Anderson die just because there were no funds, just because a son hated.

Dimly he saw Anderson folding to his knees, head still erect. Urgently he struggled with his fluid-softened lips, with his stiff throat and sluggish tongue.

Silence.

He tried to struggle again. But he was fading too quickly. The only sound that came was a groan, and a final shuddering gasp.

Anderson! He could only make an agonized echo in his own dimming mind.

"Take off the beard and hair, and he's one of them kids that didn't quite make it. You know, like that kid said this afternoon, the ones bio people set around in bottles."

Anderson! Fading and gone.

"Just get born and they're dead. That's life for you." He wagged his head. "Boy, he went out like he was trying to save the world. Put up a good one."

"Yeah," the other agreed, but he wasn't much interested. He had his own world and while it didn't need saving just yet, it would someday.

Didn't every world?

Stephen Becker's new novel, COVENANT WITH DEATH will be published by Atheneum this spring, will appear as a Book of the Month selection, and has been purchased by Warner Bros. for a price in excess of $150,000! Here he offers a third colorful and comprehensive entry in the Volume of the future. We refer you to our May and September 1964 issues for the others.

THE NEW ENCYCLOPAEDIST—III

Entries for The Great Book of History, First Edition, 2100 A.D.

by Stephen Becker

Newhouse, John Jacob (1914-1977). United States Senator from Alaska, 1963-77. The years 1970 and 1971 are called the "era of Newhousery." The production and commercial success of several Russo-American films had temporarily reduced international tensions; certain House and Senate Investigating Committees faced the loss of appropriations in a long-awaited orgy of economy. N saved the day by an oration in North Judson, Indiana, warning that America was in grave danger of subversion, rot of moral fibre, and financial ruin through the machinations of adulterers, who, he claimed, had infiltrated all levels of national life. He then charged that there were 253 adulterers in the Department of Health, Education, and Welfare, and his speech was given great publicity. He later reduced the figure to 81, and still later to 52, but by then it was generally agreed that he had alerted patriotic citizens to a serious peril.

Hearings were begun at once, with full television coverage. Particular attention was focused on aliens and college graduates. A small group of writers protested; they were immediately suppoenaed by the Newhouse Committee. Most took refuge in the First or Fifth Amendments to the Constitution, and became the core of an organized resistance; their slogan was "A gentleman may poach but not peach." Thousands everywhere were identified as known offenders by cooperative witnesses, many of whom were remunerated for their time and trouble; federal employment increased by 14.5% during the first three months of hearings. These witnesses testified that they

had been present at gatherings in various parts of the country ostensibly arranged for the purposes of drinking, playing cards, folk-dancing, etc., but which were actually corroborees of the licentious. The evidence was often not direct but circumstantial: winking, off-color stories, removal of shoes, unexplained absences in the kitchen. The guilty were said to be in constant and nation-wide communication, exchanging names and addresses and transmitting messages in code—a bouquet of orchids might mean one thing, a bottle of champagne another, etc. For their expertise in these arcana reformed professional women were highly valued; some remained closeted with investigators for hours on end, and produced exhaustive lists of putative offenders. Presumed conspirators often lost their jobs and the esteem of their neighbors; they were denied federal or state employment, and were exposed when found in sensitive positions.

The moral climate became generally severe. Metropolitan areas reported numerous vacancies in small, expensive apartments. The Furriers' Association marched on Washington. All printed matter from Sweden was banned. Private groups sprang up to support the government's policies, e.g. the Cos Cob Chastity Crusade and the Boo-Boo Caraway Society, named for the first American woman since 1945 to be betrayed by Kummel. Many citizens demonstrated good faith by compiling dossiers on their neighbors. Bausch and Lomb announced an extra dividend. The Newhouse Act prohibited the teaching and advocacy, or conspiracy to teach and advocate, "any doctrine or practise that might tend to suggest the possibility of immorality," and was passed over only two dissenting votes, both by elderly Senators. Librarians winnowed their shelves, removing e.g. the works of ➔Dante, ➔Shakespeare, and ➔Elinor Glyn; a new edition of ➔Louisa May Alcott was instantly successful. The two elections of ➔Grover Cleveland were retroactively invalidated; after a Democratic protest, ➔Warren G. Harding's victory was also voided. Europeans were horrified by these events; France withdrew from NATO, and ➔General de Gaulle stated publicly that so exciteable a people could not be trusted with the destinies of free men (*"Ils sont cinglés là-bas"*).

The first effective resistance was offered by Dr. Leo Douglas, a psychiatrist in Cleveland, Ohio, who affirmed unblushingly that he knew several people who had transgressed from the noblest of motives, and who were a credit to humanity; but he declined to name them. Rebuked and threatened by N, Douglas then declared that any investigation of the practise, or legislation limiting it, was an infringement of his rights under the First Amendment—not of his freedom of

speech, but of "the right of the people peaceably to assemble." N pointed out that the legal definition of "assembly" specified "three or more people," and the doctor's reply ("Douglas's Riposte") was, "You run your private life and I'll run mine." He was convicted of contempt, but his appeal was sustained by the Supreme Court. N then turned his attention to the United States Navy; he persisted in asking who had promoted Lieutenant-Commander Wycherly, a notoriously suave fire-control officer reputed to have cut a suspicious series of notches in his slide-rule. But the hearings had by then lost much of their point, thanks to Douglas, and the Navy, jealous of its traditions, refused to be intimidated. The investigation lost momentum, and finally came to a halt with the appearance of Bubbles Freeburg of Elgin, Illinois, who, paradoxically, never even testified. As she entered the chamber N was observed to blench, and the proceedings were halted until a doctor could be found. The committee never sat again. N died in the Great Holocaust, during a Senate debate on the appropriation for anti-missile missiles.

CORRECTION, PLEASE

Or, ANYBODY FOR CROW?

In our September issue we took issue with our own words introducing Philip K. Dick's CANTATA 140 (July 1964)—"... all presidents so far have been ... of British descent ..." —and asked to be allowed "to be the first to point out our own error and to acknowledge the Dutch origins of the Van Buren and Roosevelt families." Dr. John Boardman of Brooklyn College has since called our attention to the German origins of the Hoover and Eisenhower families. Sorry. Sorry. Sorry. Line forms at the right for any further corrections.

—A.D.

The story below and the following remarks (written by Avram Davidson in defense of the title) originally appeared in Ellery Queen's Mystery Magazine. *Both, we're sure you will agree, are especially worthy of reprint.* E.L.F.

"Where does *Queen Esther live? In the United States? In the West Indies? In the Twentieth Century of electric toasters, washing machines, and television sets? In the Eighteenth Century of cruel Creole slaveholders, obeah, duppy? She lives in a world composed of all these elements, plus elements that make up a world peculiar to herself and a few thousand other Negroes and mixed-bloods inhabiting remote and tiny islands, a world of Biblical Hebrew first-names and antique African-Amerindian sorcery and archaic English . . . Where, indeed,* do *you live, Queen Esther?—and though we can never live there ourselves, may we not catch at least a fleeting glimpse of it?—where old kings still reign and old gods have never died?"*

WHERE DO YOU LIVE, QUEEN ESTHER?

by Avram Davidson

COLD COLD, IT WAS, IN THE room where she lodged, so far from her work. The young people complained of the winter, and those born to the country—icy cold, it was, to them. So how could a foreign woman bear it, and not a young one? She had tried to find another job not so far (none were near). *Oh, my, but a woman your age shouldn't be working, the ladies said. No, no, I couldn't, really.* Kindly indeed. Thank you, mistress.

There was said to be hot water sometimes in the communal bathroom down the hall—the water in the tap in her room was so cold it

burned like fire: so strange: hot/cold—but it was always too late when she arrived back from work. Whither she was bound now. Bound indeed.

A long wait on the bare street corner for the bus. Icy winds and no doorway even, to shelter from the winds. In the buses—for there were two, and another wait for the second—if not warm, then not so cold. And at the end, a walk for many blocks. But in the house it was warm. The mistress not up yet.

Mistress . . . Queen Esther thought about Mrs. Raidy, the woman of the house. At first her was startled by the word—to she it mean, a woman live with a man and no marriage lines. But then her grew to like it, Mrs. Raidy did. Like to hear, too, mention of *the Master* and *the young Master,* his brother.

Both of they at table. "That second bus," Queen Esther said, unwrapping her head. "He late again. Me think, just to fret I."

"Oh, a few minutes don't matter. Don't worry about it," the master, Mr. Raidy, said. He never called the maid by name, nor did the mistress, but the boy—

As now, looking up with a white line of milk along his upper lip, he smiled and asked, "Where do you live, Queen Esther?" It was a game they played often. His brother—quick glance at the clock, checking his watch, head half turned to pick up sounds from upstairs, said that he wasn't to bother "her" with his silly question. A pout came over the boy's face, but yielded to her quick reply.

"Me live in the Carver Rooms on Fig Street, near Burr."

His smile broadened. "Fig! That's a fun-ny name for a street . . . But where do you live at home, Queen Esther? *I* know: Spahnish Mahn. And what you call a fig we call a bah-nah-nah. See, Freddy? *I* know."

The older one got up. "Be a goodboynow," he said, and vanished for the day.

The boy winked at her. "Queen Esther from Spanish Man, Santa Marianne, Bee-Double-You-Eye. But I really think it should be Spanish *Main,* Queen Esther." He put his head seriously to one side. "That's what they used to call the Caribbean Sea, you know."

And he fixed with his brooding ugly little face her retreating back as she went down to the cellar to hang her coat and change her shoes.

"The sea surround we on three sides at Spanish Man," she said, returning.

"You should say, 'surrounds *us,*' Queen Esther . . . You have a very funny accent, and you aren't very pretty."

Looking up from her preparations for the second breakfast, she smiled. "True *for* you, me lad."

"But then, neither am I. I look

like my father. I'm *his* brother, not *hers*, you know. Do you go swimming much when you live at home, Queen Esther?"

She put up a fresh pot of coffee to drip and plugged in the toaster and set some butter to brown as she beat the eggs; and she told him of how they swim at Spanish Man on Santa Marianna, surrounded on three sides by the sea. It was the least of the Lesser Antilles . . . She lived only part of her life in the land she worked in, the rest of the time—in fact, often at the same time—she heard, in the silence and cold of the mainland days and nights, the white surf beating on the white sands and the scuttling of the crabs beneath the breadfruit trees.

"I thought I would come down before you carried that heavy tray all the way upstairs," said the mistress, rubbing her troubled puffy eyes. Her name was Mrs. Eleanor Raidy—she was the master's wife —and her hair was teased up in curlers. She sat down with a grunt, sipped coffee, sighed. "What would I ever do without you?"

She surveyed the breakfast-in-progress. "I hope I'll be able to eat. And to retain. Some mornings," she said, darkly. Her eyes made the rounds once more. "There's no pineapple, I suppose?" she asked faintly. "Grated, with just a little powdered sugar?—Don't go to any extra trouble," she added, as Queen Esther opened the icebox. "Rodney. *Rodney?* Why do I have to shout and—"

"Yes, El. What?"

"In *that* tone of voice? If it were for my pleasure, I'd say, Nothing. But I see your brother doesn't care if you eat or not. Half a bowl of—"

"I'm finished."

"You are not finished. Finish now."

"I'll be *late*, El. They're waiting for me."

"Then they'll wait. Rush out of here with an empty stomach and then fill up on some rubbish? No. Finish the cereal."

"But it's *cold*."

"Who let it get cold? I'm not too sure at all I ought to let you go. This Harvey is older than you and he pals around with girls older than he is. Or maybe they just fix themselves up to look—Eat. Did you *hear* what I say? Eat. Most disgusting sight I ever saw, lipstick, and the *clothes?* Don't let me catch you near them. They'll probably be rotten with disease in a few years." Silently, Queen Esther grated pineapple. "I don't like the idea of your going down to the Museum without adult supervision. Who knows what can happen? Last week a boy your age was crushed to death by a truck. Did you have a—*look* at me, young man, when I'm talking to you—did you have a movement?"

"Yes."

"Ugh. If looks could kill. I don't

believe you. Go upstairs and—Rod*NEY!*"

But Rodney had burst into tears and threw down his spoon and rushed from the room. Even as Mrs. Raidy, her mouth open with shock, tried to catch the maid's eye, he slammed the door behind him and ran down the front steps.

The morning was proceeding as usual.

"And his brother leaves it all to me," Mrs. Raidy said, pursuing a piece of pineapple with her tongue. She breathed heavily. "I have you to thank, in part, I may as well say since we are on the subject, for the fact that he wakes up screaming in the middle of the night. I warned you. Didn't I warn you?"

Queen Esther demurred, said she had never spoken of it to the young master since that one time of the warning.

"One time was enough. What was that word? That name? From the superstitious story you were telling him when I interrupted. Guppy?"

"Duppy, mistress." It was simply a tale from the old slave days, Queen Esther reflected. A cruel Creole lady who went to the fields one night to meet she lover, and met a duppy instead. The slaves all heard, but were affrighted to go out; and to this day the pile of stones near Petty Morne is called The Grave of Mistress-Serve-She-Well.—Mistress Raidy had suddenly appeared at the door, as Queen Esther finished the tale, startling Master Rodney.

"Why do you tell the child such stories?" she had demanded, very angry. "See, he's scared to death."

"*You* scared me, El—sneaking up like that."

Queen Esther hastened to try to distract them.

"'Tis only a fancy of the old people. Me never fear no duppy—"

But she was not allowed to finish. The angry words scalded her. And she knew it was the end of any likelihood (never great) that she might be allowed to move her things into the little attic room, and save the hours of journeying through the cutting, searing cold.

Said the mistress, now, "Even the sound of it is stupid . . . He didn't eat much breakfast." She glanced casually out the window at the frost-white ground. "You noticed that, I suppose."

Over the sound of the running water Queen Esther said, Yes. She added detergent to the water. He never did eat much breakfast—but she didn't say this out.

"No idea why, I suppose? No? Nobody's been feeding him anything—that you know of? No spicy West Indian messes, no chicken and rice with bay leaves? Yes, yes, I know: not since that one time. All right. A word to the wise is sufficient." Mrs. Raidy arose. A grimace passed over her face, "Another day. And every-

thing is left to me. Every single thing . . . Don't take all morning with those few dishes."

Chicken and rice, with bay leaves and peppercorns. Queen Esther, thinking about it now, relished the thought. Savory, yes. Old woman in the next yard at home in Spanish Man, her cook it in an iron caldron. Gran'dame Hephsibah, who had been born a slave and still said "wittles" and "vhiskey" . . . Very sage woman. But, now, what was wrong with chicken and rice? The boy made a good meal of it, too, before he sister-in-law had come back, unexpected and early. Then shouts and tears and then a dash to the bathroom. "You've made him sick with your nasty rubbish!" But, for true, it wasn't so.

Queen Esther was preparing to vacuum the rug on the second floor when the mistress appeared at the door of the room. She dabbed at her eyes. "You know, I'm not a religious person," she osbserved, "But I was just thinking: It's a blessing the Good Lord didn't see fit to give me a child. You know why? Because I would've thrown away my life on it just as I'm throwing it away on my father-in-law's child. Can you imagine such a thing? A man fifty-two years old, a widower, suddenly gets it into his head to take a wife half his age—" She rattled away, winding up, "And so now they're both dead, and who has to put up with the results of his being a nasty old goat? No . . . Look. See what your fine young gentleman had hidden under the cushion of his bedroom chair."

And she riffled the pages of a magazine. Queen Esther suppressed a smile. It was only natural, she wanted to say. Young gentlemen liked young ladies. Even up in this cold and frozen land—true, the boy was young. That's why it was natural he only looked—and only at pictures.

"Oh, there's very little gets past *me,* I can assure you. Wait. When he gets back. Museum trips. Dirty pictures. Friends from who knows where. No *more!*"

Queen Esther finished the hall rugs, dusted, started to go in to vacuum the guest room. Mrs. Raidy, she half observed in the mirror, was going downstairs. Just as the mistress passed out of sight, she threw a glance upward. Queen Esther only barely caught it. She frowned. A moment later a faint jar shook the boards beneath her feet. The cellar door. Bad on its hinges. Queen Esther started the vacuum cleaner; a sudden thought made her straighten up, reach for the switch. For a moment she stood without moving. Then she propped the cleaner, still buzzing, in a corner, and flitted down the steps.

There was, off the kitchen, a large broom closet, with a crack in the wall. Queen Esther peered through the crack. Diagonally be-

low in the cellar was an old victrola and on it the maid had draped her coat and overcoat and scarf; next to it were street shoes, not much less broken than the ones she wore around the house.

Mistress Raidy stood next to the gramophone, her head lifted, listening. The hum of the vacuum cleaner filtered through the house. With a quick nod of her head, tight-lipped in concentration, the mistress began going through the pockets of the worn garments. With little grunts of pleasurable vexation she pulled out a half-pint bottle of fortified wine, some pieces of cassava cake—"That's all we need. A drunken maid. Mice. Roaches. *Oh,* yes."—a smudged hektographed postal card announcing the Grand Annual Festivity of the St. Kitts and Nevis Wesleyan Benevolent Union, a tattered copy of Lucky Tiger Dream Book, a worn envelope . . .

Here she paused to dislodge a cornerless photograph of Queen Esther's brother Samuel in his coffin and to comment, "As handsome as his sister." There were receipts for international postal orders to Samuel's daughter Ada—"Send my money to foreign countries." A change purse with little enough in it, a flat cigarette tin. This she picked at with nervous fingers, chipping a nail. Clicking her tongue, she got it open, found, with loathing large upon her face—

—a tiny dried frog—a *frog?*—a—surely *not!*—

"Oh!" she said, in a thin, jerky, disgusted voice. "Uh. *Uh!*" She threw the tin away from her, but the thing was bound with a scarlet thread and this caught in her chipped fingernail.

"—out of this *house!*" she raged, flapping her wrist, "and never set foot in it *again,* with her *filthy-ah!*" The thread snapped, the thing flew off and landed in a far corner. She turned to go and had one unsteady foot on the first step when she heard the noise behind her.

Later on, when Queen Esther counted them, she reckoned it as twenty-five steps from the broom closet to the bottom of the cellar stairs. At that moment, though, they seemed to last forever as the screams mounted in intensity, each one seeming to overtake the one before it without time or space for breath between. But they ceased as the maid clattered down the steps, almost tripping over the woman crouched at the bottom.

Queen Esther spared she no glance, then, but faced the thing advancing. Her thrust she hand into she bosom. "Poo!" her spat. "You ugly old duppy! Me never fear no duppy, no, not me!"

And her pulled out the powerful obeah prepared for she long ago by Gran'dame Hephsibah, that sagest of old women, half Ashanti, half Coromanti. The duppy

growled and driveled and bared its worndown stumps of filthy teeth, but retreated step by step as her came forward, chanting the words of power; till at last it was shriveled and bound once more in the scarlet thread and stowed safely away in the cigarette tin. *Ugly old duppy . . .!*

Mr. Raidy took the sudden death of his wife with stoical calm. His younger brother very seldom has nightmares now, and eats heartily of the savory West Indian messes that Queen Esther prepares for all three of them. Hers is the little room in the attic; the chimney passes through one corner of it, and Queen Esther is warm, warm, warm.

THE BLACK OF NIGHT

by Isaac Asimov

I SUPPOSE MANY OF YOU ARE FAMILIAR with the comic strip "Peanuts." My daughter, Robyn (now in the fourth grade) is very fond of it, as I am myself.

She came to me one day, delighted with a particular sequence in which one of the little characters in "Peanuts" asks his bad-tempered older sister, "Why is the sky blue?" and she snaps back, "Because it isn't green!"

When Robyn was all through laughing, I thought I would seize the occasion to maneuver the conversation in the direction of a deep and subtle scientific discussion (entirely for Robyn's own good, you understand). So I said, "Well, tell me, Robyn, why is the night sky black?"

And she answered at once (I suppose I ought to have foreseen it), "Because it isn't purple!"

Fortunately, nothing like this can ever seriously frustrate me. If Robyn won't cooperate, I can always turn, with a snarl, on the Helpless Reader. I will discuss the blackness of the night sky with *you!*

The story of the black of night begins with a German physician, Heinrich Wilhelm Matthias Olbers, born in 1758. He practiced astronomy as a hobby and in mid-life, he suffered a peculiar disappointment. It came about in this fashion—

Toward the end of the 18th century, astronomers began to suspect, quite strongly, that some sort of planet must exist between the orbits of Mars and Jupiter (for reasons I went into, in some detail, in BEYOND PLUTO, F & SF, July, 1960). A team of German astronomers, of whom Olbers was one of the most important, set themselves up with the intention of dividing the ecliptic among themselves and each searching his own portion, meticulously, for the planet.

Olbers and his friends were so systematic and thorough that by rights they should have discovered the planet and received the credit of it. But life is funny (to coin a phrase). While they were still arranging the details, an Italian astronomer, Giuseppe Piazzi, who wasn't looking for planets at all, discovered, on the night of January 1, 1801, a point of light which had shifted its position against the background of stars. He followed it for a period of time and found it was continuing to move steadily. It moved less rapidly than Mars and more rapidly than Jupiter, so it was very likely a planet in an intermediate orbit. He reported it as such so that it was the casual Piazzi and not the thorough Olbers who got the nod in the history books.

Olbers didn't lose out altogether, however. It seems that after a period of time, Piazzi fell sick and was unable to continue his observations. By the time he got back to the telescope, the planet was too close to the Sun to be observable.

Piazzi didn't have enough observations to calculate an orbit and this was bad. It would take months for the slow-moving planet to get to the other side of the Sun and into observable position, and without a calculated orbit, it might easily take years to rediscover it.

Fortunately, a young German mathematician, Karl Friedrich Gauss was just blazing his way upward into the mathematical firmament. He had worked out something called the "method of least squares" which made it possible to calculate a reasonably good orbit from no more than three observations of a planetary position.

Gauss calculated the orbit of Piazzi's new planet and when it was in observable range once more, there was Olbers and his telescope watching the place where Gauss's calculations said it would be. Gauss was right and, on January 1, 1802, Olbers found it.

To be sure, the new planet (named "Ceres") was a peculiar one, for it turned out to be less than 500 miles in diameter. It was far smaller than any other known planet and smaller than at least six of the satellites known at that time.

Could Ceres be all that existed between Mars and Jupiter? The German astronomers continued looking (it would be a shame to waste all that preparation) and sure enough, three more planets between Mars and Jupiter were soon discovered. Two of them, Pallas and Vesta, were discovered by Olbers. (In later years, many more were discovered.)

But, of course, the big pay-off isn't for second place. All Olbers got out of it was the name of a planetoid. The thousandth planetoid between Mars and Jupiter was named "Piazzia", the thousand and first "Gaussia", and the thousand and second "Olberia."

Nor was Olbers much luckier in his other observations. He specialized in comets and discovered five of them, but practically anyone can do that. There is a comet called "Olbers' Comet" in consequence but that is a minor distinction.

Shall we now dismiss Olbers? By no means—

It is hard to tell just what will win you a place in the annals of science. Sometimes it is a piece of interesting reverie that does it. In 1826, Olbers indulged himself in an idle speculation concerning the black of night and dredged out of it an apparently ridiculous conclusion.

Yet that speculation became "Olbers' paradox" which has come to have profound significance a century afterward. In fact, we can begin with Olbers' paradox and end with the conclusion that the only reason life exists anywhere in the universe is that the distant galaxies are receding from us.

What possible effect can the distant galaxies have on us? Be patient now and we'll work it out.

In ancient times, if any astronomer had been asked why the night-sky was black, he would have answered—quite reasonably—that it was because the light of the Sun was absent. If one had then gone on to question him why the stars did not take the place of the Sun, he would have answered—again reasonably—that the stars were limited in number and individually dim. In fact, all the stars we can see would, if lumped together, be only a half-billionth as bright as the Sun. Their influence on the blackness of the night sky is therefore insignificant.

By the 19th Century, however, this last argument had lost its force. The number of stars was tremendous. Large telescopes revealed them by the countless millions.

Of course, one might argue that those countless millions of stars were of no importance for they were not visible to the naked eye and therefore did not contribute to the light in the night-sky. This, too, is a useless argument. The stars of the Milky Way are, individually, too faint to be made out, but *en masse,* they make a dimly luminous belt about the sky. The Andromeda galaxy is much farther away than the stars of the Milky Way and the individual stars that make it up are not individually visible except (just barely) in a very large telescope. Yet, *en masse,* the Andromeda galaxy is faintly visible to the naked eye. (It is, in fact, the farthest object visible to the unaided eye; so if anyone ever asks you how far you can see; tell him 2,000,000 light-years.)

In short, distant stars—no matter how distant and no matter how dim, individually—must contribute to the light of the night sky and this contribution can even become detectable without the aid of instruments if these dim distant stars exist in sufficient numbers.

Olbers, who didn't know about the Andromeda galaxy, but did know about the Milky Way, therefore set about asking himself how much light ought to be expected from the distant stars altogether. He began by making several assumptions:

1. That the universe is infinite in extent.
2. That the stars are infinite in number and evenly spread throughout the universe.
3. That the stars are of uniform average brightness through all of space.

Now let's imagine space divided up into shells (like those of an onion) centering about ourselves, comparatively thin shells compared with the vastness of space, but large enough to contain stars within themselves.

Remember that the amount of light that reaches us from individual stars of equal luminosity varies inversely as the square of the distance from us. In other words, if Star A and Star B are equally bright but Star A is three times as far as Star B, Star A delivers only $\frac{1}{9}$ the light. If Star A were five times as far as Star B, Star A would deliver 1/25 the light and so on.

This holds for our shells. The average star in a Shell 2000 light-years from ourselves would be only $\frac{1}{4}$ as bright in appearance as the average star in a Shell only 1000 light-years from ourselves. (Assumption Three tells us, of course, that the intrinsic brightness of the average star in both shells is the same, so that distance is the only factor we need consider.) Again, the average star in a Shell 3000 light-years from ourselves would be only $\frac{1}{9}$ as bright in appearance as the average star in the 1000 light-year Shell, and so on.

But as one works one's way outward, each succeeding shell is more voluminous than the one before. Since each shell is thin enough to be considered, without appreciable error, to be the surface of the sphere made up of all the shells within, we can see that the volume of the shells increases as the surface of the spheres would—that is, as the square of the radius. The 2000 light-year Shell would have four times the volume of the 1000 light-year Shell. The 3000 light-year Shell would have nine times the volume of the 1000 light-year Shell and so on.

If we consider the stars to be evenly distributed through space

(Assumption 2) then the number of stars in any given shell is proportional to the volume of the shell. If the 2000 light-year Shell is four times as voluminous as the 1000 light-year Shell, it contains four times as many stars. If the 3000 light-year Shell is nine times as voluminous as the 1000 light-year Shell, it contains nine times as many stars, and so on.

Well, then, if the 2000 light-year Shell contains four times as many stars as the 1000 light-year Shell and if each star in the former is ¼ as bright (on the average) as each star of the latter, then the total light delivered by the 2000 light-year Shell is 4 times ¼ that of the 1000 light-year shell. In other words the 2000 light-year Shell delivers just as much total light as the 1000 light-year Shell does. The total brightness of the 3000 light-year Shell is 9 times ⅑ that of the 1000 light-year Shell and the brightness of the two shells is equal again.

In summary, if we divide the universe into successive shells, each shell delivers as much light, *in toto,* as do any of the others. And if the universe is infinite in extent (Assumption 1) and therefore consists of an infinite number of shells, the stars of the universe, however dim they may be individually, ought to deliver an infinite amount of light to the earth.

The one catch, of course, is that the nearer stars may block the light of the more distant stars.

To take this into account, let's look at the problem in another way. In no matter which direction one looks, the eye will eventually encounter a star, if it is true they are infinite in number and evenly distributed in space (Assumption 2). The star may be individually invisible, but it will contribute its bit of light and it will be immediately adjoined in all directions by other bits of light.

The night sky would then not be black at all but would be an absolutely solid smear of star-light. So should the day sky be an absolutely solid smear of star-light, with the Sun itself invisible against the luminous background.

Such a sky would be roughly as bright as 150,000 suns like ours and do you question that under those conditions life on Earth would be impossible?

However, the sky is *not* as bright as 150,000 suns. The night-sky *is* black. Somewhere in the Olbers' paradox there is some mitigating circumstance or some logical error.

Olbers himself thought he found it. He suggested that space was not truly transparent; that it contained clouds of dust and gas which ab-

sorbed most of the starlight, allowing only an insignificant fraction to reach the Earth.

That sounds good, but is no good at all. There are indeed dust clouds in space but if they absorbed all the starlight that fell upon them (by the reasoning of Olbers' paradox) then their temperature would go up until they grew hot enough to be luminous. They would, eventually, emit as much light as they absorb and the Earth sky would still be star-bright over all its extent.

But if the logic of an argument is faultless and the conclusion is still wrong, we must investigate the assumptions. What about Assumption 2, for instance? Are the stars indeed infinite in number and evenly spread throughout the universe.

Even in Olbers' time, there seemed reason to believe this assumption to be false. The German-English astronomer, William Herschel, made counts of stars of different brightness. He assumed that, *on the average,* the dimmer stars were more distant than the bright ones (which follows from Assumption 3) and found that the density of the stars in space fell off with distance.

From the rate of decrease in density in different directions, Herschel decided that the stars made up a lens-shaped figure. The long diameter, he decided, was 150 times the distance from the Sun to Arcturus (or 6000 light-years, we would now say) and the whole conglomeration would consist of 100,000,000 stars.

This seemed to dispose of Olbers' paradox. If the lens-shaped conglomerate (now called the Galaxy) truly contained all the stars in existence then Assumption 2 breaks down. Even if we imagined Space to be infinite in extent outside the Galaxy (Assumption 1), it would contain no stars to speak of and would contribute no illumination. Consequently, there would be only a finite number of star-containing Shells and only a finite (and not very large) amount of illumination would be received on Earth. That would be why the night sky is black.

The estimated size of the Galaxy has been increased since Herschel's day. It is now believed to be 100,000 light-years in diameter, not 6000; and to contain 150,000,000,000 stars, not 100,000,000. This change, however, is not crucial; it still leaves the night-sky black.

In the 20th Century Olbers' paradox came back to life, for it came to be appreciated that there were indeed stars outside the Galaxy.

The foggy patch in Andromeda had been felt throughout the 19th Century to be a luminous mist that formed part of our own Galaxy.

However, other such patches of mist (the Orion Nebula, for instance) contained stars that lit up the mist. The Andromeda patch, on the other hand seemed to contain no stars but to glow of itself.

Some astronomers began to suspect the truth, but it wasn't definitely established until 1924, when the American astronomer, Edwin Powell Hubble, turned the 100-inch telescope on the glowing mist and was able to make out separate stars in its outskirts. These stars were individually so dim that it became clear at once that the patch must be hundreds of thousands of light years away from us and far outside the Galaxy. Furthermore, to be seen, at it was, at that distance, it must rival in size our entire Galaxy and be another galaxy in its own right.

And so it is. It is now believed to be over 2,000,000 light years from us and to contain at least 200,000,000,000 stars. Still other galaxies were discovered at vastly greater distances. Indeed, we now suspect that within the observable universe there are at least 100,000,000,000 galaxies and the distance of some of them have been estimated as high as 6,000,000,000 light-years.

Let us take Olbers' three assumptions then and substitute the word "galaxies" for "stars" and see how they sound.

Assumption 1, that the universe is infinite, sounds good. At least, there is no sign of an end even out to distances of billions of light-years.

Assumption 2, that *galaxies* (not stars) are infinite in number and evenly spread throughout the universe, sounds good, too. At least they are evenly distributed as far out as we can see, and we can see pretty far.

Assumption 3, that *galaxies* (not stars) are of uniform average brightness throughout space, is harder to handle. However, we have no reason to suspect that distant galaxies are consistently larger or smaller than nearby ones and if the galaxies come to some uniform average size and star-content, then it certainly seems reasonable to suppose they are uniformly bright as well.

Well, then, why is the night-sky black? We're back to that.

Let's try another track. Astronomers can determine whether a distant luminous object is approaching us or receding from us by studying its spectrum (that is; its light as spread out in a rainbow of wavelengths from short-wavelength violet to long-wavelength red).

The spectrum is crossed by dark lines which are in a fixed position if the object is motionless with respect to us. If the object is approaching us, the lines shift toward the violet. If the object is receding from us, the lines shift toward the red. From the size of the shift, astronomers can determine the velocity of approach or recession.

In the 1910's and 1920's, the spectra of some galaxies (or bodies later understood to be galaxies) were studied and except for one or two of the very nearest, all are receding from us. In fact, it soon became apparent that the farther galaxies are receding more rapidly than the nearer ones. Hubble was able to fomulate what is now called "Hubble's Law" in 1929. This states that the velocity of recession of a galaxy is proportional to its distance from us. If Galaxy A is twice as far as Galaxy B, it is receding at twice the velocity. The farthest observed galaxy, 6,000,000,000 light-years from us, is receding at a velocity half that of light.

The reason for Hubble's Law is taken to lie in the expansion of the universe itself; an expansion which can be made to follow from the equations set up by Einstein's general theory of relativity (which, I hereby state firmly, I will *not* go into).

Given the expansion of the universe, now, how are Olbers' assumptions affected?

If, at a distance of 6,000,000,000 light-years, a galaxy recedes at half the speed of light; then, at a distance of 12,000,000,000 light-years, a galaxy ought to be receding at the speed of light (if Hubble's Law holds). Surely, further distances are meaningless for we cannot have velocities greater than that of light. Even if that were possible, no light, or any other "message" could reach us from such a more-distant galaxy and it would not, in effect, be in our universe. Consequently, we can imagine the universe to be finite after all, with a "Hubble radius" of some 12,000,000,000 light years.

But that doesn't wipe out Olber's paradox. Under the requirements of Einstein's theories, as galaxies move faster and faster, relative to an observer, they become shorter and shorter in the line of travel and take up less and less space, so that there is room for larger and larger numbers of galaxies. In fact, even in a finite universe, with a radius of 12,000,000,000 light-years, there might still be an infinite number of galaxies; almost all of them (paper-thin) existing in the outermost few miles of the Universe-sphere.

So Assumption 2 stands even if Assumption 1 does not; and Assumption 2, by itself, can be enough to insure a star-bright sky.

But what about the red-shift?

Astronomers measure the red-shift by the change in position of the spectral lines, but those lines move only because the entire spectrum moves. A shift to the red is a shift in the direction of lesser energy. A receding galaxy delivers less radiant energy to the earth than the same galaxy would deliver if it were standing still relative to ourselves

—just because of the red shift. The faster a galaxy recedes, the less radiant energy it delivers. A galaxy receding at the speed of light delivers no radiant energy at all no matter how bright it might be.

Thus, Assumption 3 fails! It would hold true if the universe were static, but not if it is expanding. Each succeeding shell in an expanding universe delivers less light than the one within because their content of galaxies are successively further from us; are subjected to a successively greater red shift; and fall short, more and more, of the expected radiant energy they might deliver.

And because Assumption 3 fails, we receive only a finite amount of energy from the universe and the night-sky is black.

According to the most popular models of the universe, this expansion will always continue. It may continue without the production of new galaxies so that, eventually, billions of years hence, our Galaxy (plus a few of its neighbors, which together make up the "Local Cluster" of galaxies) will be alone in the universe. All the other galaxies will have receded too far to detect. Or new galaxies may continuously form so that the universe will always seem full of galaxies, despite its expansion. Either way, however, expansion will continue and the night-sky will remain black.

There is another suggestion, however, that the universe oscillates; that the expansion will gradually slow down until the universe comes to a moment of static pause, then begins to contract again, faster and faster, till it tightens at last into a small sphere that explodes and begins a new expansion.

If so, then as the expansion slows, the dimming effect of the red shift will diminish and the night-sky will slowly brighten. By the time the universe is static, the sky will be uniformly star-bright as Olbers' paradox required. Then, once the universe starts contracting, there will be a "violet-shift" and the energy delivered will increase so that the sky will become far brighter and still brighter.

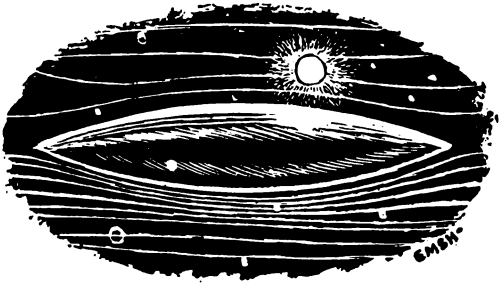
This will be true not only for the Earth (if it still existed in the far future of a contracting universe) but for any body on any sort in the universe. In a static or, worse still, a contracting universe, there could, by Olbers' paradox, be no cold bodies, no solid bodies. There would be uniform high temperatures everywhere—in the millions of degrees, I suspect—and life simply could not exist.

So I get back to my earlier statement. The reason there is life on Earth, or anywhere in the universe, is simply that the distant galaxies are moving away from us.

In fact, now that we know the ins and outs of Olber's paradox, might we, do you suppose, be able to work out the recession of the distant galaxies as a necessary consequence of the blackness of the night-sky? Maybe we could amend the famous statement of the French philosopher, René Descartes.

He said, "I think, therefore I am!"

And we could add: "I am, therefore the universe expands!"



COMING NEXT MONTH

BUFFOON by Edward Wellen

a moving and beautifully written story about an alien "intrusion" into the Aztec empire.

Somebody had to write the following story, and we're glad it was Mr. Bob FitzPatrick, who says that "it grinds no axes; it will not offend conservatives, and it will tickle hell out of liberals." We think it delivers a solid punch. It may knock you down, but you'll come up smiling. You see, it concerns race, politics and . . . hey, how come everyone's leaving the room.

ON THE HOUSE

by R. C. FitzPatrick

HER SON WAS KILLED IN MICHIgan, and when they brought her the news she asked them, how? She knew he was away from home on business of his own and she wondered, why? Nothing out of the ordinary, she was told. They sympathized at first, and then they told her that black had met white in a pointless melee. It had been an inexcusable stupidity. Bones were broken, blood flowed, and nothing was accomplished. It was all a shame, really. Really a shame.

She cried a bit at first. An ordinary reaction for a mother, and she was an ordinary mother. Or had been. Now she no longer felt herself ordinary, or a mother. She was not old and fat and ugly and careworn. Nor was she unintelligent and uneducated, knowing not which way to turn. On the contrary. She looked ten years younger than her actual age; urbane, lovely, and athletic. And her education had progressed far beyond her graduation from college. She knew precisely which way to turn, or better yet, she knew how to find the information to tell her which way to turn.

Her first husband had been a professional football player. And aside from his color, he had had an inordinate fear of being considered a dumb brute because of his calling. Their life together had been a ceaseless round of discussion groups, home study, and art museums. She had met, married, and divorced him because of the latter. She had never before been out to prove anything to anyone.

Her second husband was a lawyer. And while they no longer lived together, she still had unrestricted use of their communal home. Her

second husband's father had also been a lawyer, as had his father before him. It is surprising what a full, rich library three diligent collectors can amass during their respective lifetimes.

What she could not find in her husband's library, she bought. Or stole. It took her forty-five minutes of careful, sidelong glances, and careful, gentle tugs to tear out a certain page from a certain manuscript in the archives of the New York Public Library. Of all her subsequent actions, that one small bit of desecration had made her most ashamed. But she had long since subordinated her ethics to her mission, and she determinedly overrode any momentary qualms that she experienced.

She started her search in March. By June she had exhausted the resources of the city. There was not one, small, hidden, bookstore whose drab and dusty owner had not helped her in her search. In August she flew to Paris, and from there, by various routes, she traveled to Wurzburg, Bamberg, and Paderborn in Germany. And then back to Paris by way of Toulouse, Lyons, and the Labourt section of Bordeaux. She spent a week in that most mundane of cities, Geneva, in Switzerland. And then by air to Glasgow, Scotland, where she tramped the roads of County Caithness. At the close of October she returned to New York, having stopped on the way in London, Portsmouth, Boston and Plymouth, as she arranged for her final appointment. Her preparations were almost complete, but being on toward winter, she was obliged to fly to Arizona, where by judicious tipping and careful pleas, she was able to enlist a troop of small boys who collected for her what little else was needed.

She had eye of newt, and skin of toad, and ash from a fire wherein a witch had burned. She had owl's blood, and bats brains, and a tooth from a dog that had bitten a priest. She had, altogether, a most noxious and ridiculous collection of garbage, especially when spread on the floor of her most modern New York apartment. But she did not laugh at herself. Not then. Her laughing time had been long since spent.

Carefully she drew the pentagram, lit the fires, and muttered the proper incantations. When the smoke cleared she was not at all surprised to see the Devil standing before her in a seersucker suit.

"That's a little bit chilly for this time of the year, isn't it?" the woman asked.

"I try to dress to please my clients," said the Devil. "This is the way you expected me to appear, isn't it Mrs. Williamson?" Except for his tail he looked much like a used car salesman.

She was not the least interested in how he knew her name, but he looked so pleased with himself that

she felt obliged to say, "You know who I am?"

"Oh my, Yes," said the Devil. "I was fascinated by your preparations. It isn't often that I find one of your kind through personal contact."

"Not down there, too," said Mrs. Williamson.

"Oh my, No," said the Devil. He chuckled. "I might even say, Hell no!" He paused. "Unh . . . nunh . . . unh." He cleared his throat and went on when she failed to smile. "I didn't mean your color, you're a rather sophisticated and intelligent woman. Most of my clients nowadays go in for mumbo jumbo, witch doctors, you know, that sort of thing."

"Does that nonsense work?" asked Mrs. Williamson.

"Anything works," said the Devil. "Provided the intentions are sincere. What could be more nonsensical than reciting the . . ." he cast his eyes skyward, ". . . my competitor's prayer backwards."

"Then I really didn't have to go through all this?" asked Mrs. Williamson.

"No, not really," said the Devil.

"Then you know what I want," said Mrs. Williamson.

"No I don't," said the Devil quickly. "That would take all the fun away. Even Satan deserves some pleasure, you know. I make an honest effort never to read minds. Omniscience is not one of my stronger points. Of course, some souls come through clearer than others, but after I've established that they have a sincere desire . . ." He chuckled. ". . . to go to the Devil, I never read their minds." He had to clear his throat again when the woman failed to respond. He reached in the inside pocket of his jacket and brought out a form. "Now if you'll tell me what it is you want, we can establish the price."

"I thought there was only one price," said Mrs. Williamson.

"Well, there is really," said the Devil. "But it all depends on what you buy with it. That's what counts. There are levels to badness just as there are to goodness. We reserve the lower levels of Hades to those who have had the world." He smiled wickedly, "I'm using 'had' in the vernacular, of course. I hate to see people go beyond their means. Now you've impressed me as a reasonable woman. I'm sure you don't want riches or glory or that sort of thing. Simple revenge, for instance, will only cost you the second level from the top."

"Revenge is what I had in mind," said Mrs. Williamson.

"Oh," said the Devil. He seemed disappointed.

"Of a special kind," said Mrs. Williamson.

"Good, good," said the Devil brightening. He chuckled. "Or should I say, bad, bad." He was forced to clear his throat again

when the woman simply looked at him. "Well, on to business." He took out a pen and started going over the form. "Let's see, we have your full name, age, address . . . now, under this heading, 'Revenge', how do you want to go about it? Murder? Torture? Horrible disease?"

"No, no, nothing that simple," said Mrs. Williamson.

"Well," said the Devil pleasantly, "some of our lower levels are really quite reasonable. What exactly did you have in mind?"

"I wish to trade bodies," said Mrs. Williamson.

"Original," said the Devil. "I knew you'd be worth my time."

"With a man," said Mrs. Williamson.

"Oh ho!" said the Devil with a leer. "This has all sorts of interesting aspects. Biological transvestism. That should be fun, even if it is with the man who killed your son."

"That would be pointless," said Mrs. Williamson. "No, I'm much more interested in the man responsible."

"Not the man who killed your son?" asked the devil frowning.

"Why?" said Mrs. Williamson. "He was only the trigger, I want the man who pointed the gun."

"Someone in authority?" asked the Devil. He was definitely displeased.

"That's who I mean," said Mrs. Williamson.

"For the good of your people?" asked the Devil with a scowl.

"That might be incidental," said Mrs. Williamson, "but that's not what I had in mind. And if it interferes with our agreement, you can write it into the contract that I can't indulge in any such activity."

The Devil relaxed. "And the man?" he asked.

"His name is Wallace," said Mrs. Williamson. "He lives in Alabama."

"Wallace?" echoed the Devil. He began to grin.

"That Wallace!" said Mrs. Williamson. "He's a functionary," she added. "A fluctuating functionary," she said, enunciating each word distinctly.

The Devil leaned back and raised an eyebrow. His tail began to twitch and his grin became a smile. Slowly, and with the utmost care, he tore the contract in half. Then putting the pieces together, he tore them in half again. He looked into her suddenly distraught eyes, "Don't worry, my dear," said the Devil. He pursed his lips, put the pieces together again, and tore them in half for the third time. "Madam . . ." said the Devil, ". . . or Sir," he said to the now terror stricken eyes, "this one is on the house." ◄

Harry Harrison—who has appeared here thrice before: SURVIVAL PLANET, straight Science Fiction; CAPTAIN HONARIO HARP-PLAYER, R.N., humorous satire; and INCIDENT ON THE IND, *Fantasy—was at one time a magazine editor and illustrator . . . or, more accurately, at different times. He knows the problems of the commercial artist. He also knows the manner and method of the jack-leg publisher. And in this utterly realistic little story he takes us into a future where the decay of the arts and the corruption of the popular taste leads logically to the death of talent.*

PORTRAIT OF THE ARTIST

by Harry Harrison

11 A.M.!!! THE NOTE BLARED AT him, pinned to the upper right corner of his drawing board. *MARTIN'S OFFICE!!* He had lettered it himself with a number 7 brush, funereal india ink on harsh yellow paper, big letters, big words.

Big end to everything. Pachs tried to make himself believe that this was just another one of Martin's royal commands: a lecture, a chewing-out, a complaint. That's what he had thought when he had knocked out the reminder for himself, before Miss Fink's large watery eyes had blinked at him and she had whispered hoarsely, "It's on order, Mr. Packs, coming today, I saw the receipt on his desk. A Mark IX." She had blinked moistly again, rolled her eyes towards the closed door of Martin's office then scurried away.

A Mark IX. He knew that it would have to come some day, knew without wanting to admit it, and had only been kidding himself when he said they couldn't do without him. His hands spread out on the board before him, old hands, networked wrinkles and dark liver spots, always stained a bit with ink and marked with a permanent callous on the inside of his index finger. How many years had he held a pencil or a brush there? He didn't want to remember. Too many, perhaps . . . He clasped his hands tightly together, making believe he didn't see them shaking.

There was almost an hour left before he had to see Martin, plenty of time to finish up the story he was working on. He pulled the sheet of illustration board from the top of the pile and found the script. Page three of a thing called *Prairie Love* for the July issue of *Real Rangeland Romances.* Love books with their heavy copy were always a snap. By the time Miss Fink had typed in the endless captions and dialogue on her big flatbed varityper at least half of every panel was full. The script, panel one:

In house, Judy C/U cries and Robert in BG very angry.

A size three head for Judy in the foreground, he quickly drew the right size oval in blue pencil, then a stick figure for Robert in the background. Arm raised, fist closed, to show anger. The Mark VIII Robot Comic Artist would do all the rest. Pachs slipped the sheet into the machine's holder—then quickly pulled it out again. He had forgotten the balloons. Sloppy, sloppy. He quickly blue-penciled their outlines and V's for tails.

When he thumbed the switch the machine hummed to life, electronic tubes glowing inside its dark case. He punched the control button for the heads, first the girl —GIRL HEAD, FULL FRONT, SIZE THREE, SAD HEROINE. Girls of course all had the same face in comic books, the HEROINE was just a note to the machine not to touch the hair. For a VILLAINESS it would be inked in black, all villainesses have black hair, just as all villains have mustaches as well as the black hair, to distinguish them from the hero. The machine buzzed and clattered to itself while it sorted through the stock cuts, then clicked and banged down a rubber stamp of the correct head over the blue circle he had drawn. MAN HEAD, FULL FRONT, SIZE SIX, SAD, HERO brought a smaller stamp banging down on the other circle that topped the stick figure. Of course the script said *angry,* but that was what the raised fist was for, since there are only sad and happy faces in comics.

Life isn't that simple, he thought to himself, a very unoriginal idea that he usually brought out at least once a day while sitting at the machine. MAN FIGURE, BUSINESS SUIT he set on the dial, then hit the DRAW button. The pen-tipped arm dropped instantly and began to quickly ink in a suited man's figure over the blue direction lines he had put down. He blinked and watched it industrously knocking in a wrinkle pattern that hadn't varied a stroke in fifty years, then a collar and tie and two swift neck lines to connect the neatly inked torso to the rubber-stamped head. The pen leaped out to the cuff end of the

just-drawn sleeve and quivered there. A relay buzzed and a dusty red panel flashed INSTRUCTIONS PLEASE at him. With a savage jab he pushed the button labeled FIST. The light went out and the flashing pen drew a neat fist at the end of the arm.

Pachs looked at the neatly drawn panel and sighed. The girl wasn't unhappy enough; he dipped his crowquill into the ink pot and knocked in two tears, one in the corner of each eye. Better. But the background was still pretty empty in spite of the small dictionary in each balloon. BALLOONS he punched automatically while he thought, and the machine pen darted down and inked the outlines of the balloons that held the lettering, ending each tail the correct distance from the speaker's mouth. A little background, it needed a touch. He pressed code 473 which he knew from long experience stood for HOME WINDOW WITH LACE CURTAINS. It appeared on the paper quickly, automatically scaled by the machine to be in perspective with the man's figure before it. Pachs picked up the script and read panel two:

Judy falls on couch Robert tries to console her mother rushes in angrily wearing apron.

There was a four line caption in this panel and, after the three balloons had been lettered as well, the total space remaining was just about big enough for a single closeup, a small one. Pachs didn't labor this panel, as he might have, but took the standard way out. He was feeling tired today, very tired. HOUSE, SMALL, FAMILY Produced a small cottage from which emerged the tails of the three balloons and let the damn reader figure out who was talking.

The story was finished just before eleven and he stacked the pages neatly, put the script into the file and cleaned the ink out of the pen in the Mark VIII; it always clogged if he left it to dry.

Then it was eleven and time to see Martin. Pachs fussed a bit, rolling down his sleeves and hanging his green eyeshade from the arm of his dazor lamp; yet the moment could not be avoided. Pulling his shoulders back a bit he went out past Miss Fink hammering away industrously on the varityper, and walked in through the open door to Martin's office.

"Come ON, Louis," Martin wheedled into the phone in his most syrupy voice. "If it's a matter of taking the word of some two-bit shoestring distributor in Kansas City, or of taking my word, who you gonna doubt? That's right . . . okay . . . right Louis. I'll call you back in the morning . . . right, you too . . . my best to Helen." He banged the phone back onto the desk and glared up at Pachs with his hard beebee eyes.

"What do you want?"

"You told me you wanted to see me, Mr. Martin."

"Yeah, yeah," Martin mumbled half to himself. He scratched flakes of dandruff loose from the back of his head with the chewed end of a pencil, and rocked from side to side in his chair.

"Business is business, Pachs, you know that, and expenses go up all the time. Paper—you know how much it costs a ton? So we gotta cut corners . . ."

"If you're thinking of cutting my salary again, Mr. Martin, I don't think I could . . . well, maybe not much . . ."

"I'm gonna have to let you go, Pachs. I've bought a Mark IX to cut expenses and I already hired some kid to run it."

"You don't have to do that, Mr. Martin," Pachs said hurriedly, aware that his words were tumbling one over the other and that he was pleading, but not caring. "I could run the machine I'm sure, just give me a few days to catch on . . ."

"Outta the question. In the first place I'm paying the kid beans because she's just a kid and that's the starting salary, and in the other place she's been to school about this thing and can really grind the stuff out. You know I'm no bastard, Pachs, but business is business. And I'll tell you what, this is only Tuesday and I'll pay you for the rest of the week. How's that? And you can take off right now."

"Very generous, particularly after eight years," Pachs said, forcing his voice to be calm.

"That's alright, it's the least I could do." Martin was congenitally immune to sarcasm.

The lost feeling hit Pachs then, a dropping away of his stomach, a sensation that everything was over. Martin was back on the phone again and there was really nothing that Pachs could say. He walked out of the office, walking very straight, and behind him he heard the banging of Miss Fink's machine halt for a instant. He did not want to see her, to face those tender and damp eyes, not now. Instead of turning to go back to the studio, where he would have to pass her desk, he opened the hall door and stepped out. He closed it slowly behind him and stood with his back to it for an instant, until he realized it was frosted glass and she could see his figure from the inside: he moved hurriedly away.

There was a cheap bar around the corner where he had a beer every payday, and he went there now. "Good morning and top of the morning to you . . . Mr. Pachs," the robot bartender greeted him with recorded celtic charm, hesitating slightly between the stock phrase and the search of the customer-tapes for his name. "And will you be having the usual?"

"No I will not be having the usual, you plastic and gaspipe imitation of a cheap stage Irish-

man, I'll be having a double whiskey."

"Sure and you are the card, sir," the electronically affable bartender nodded, horsehair spitcurl bobbing, as it produced a glass and bottle and poured a carefully measured drink.

Pachs drank it in a gulp and the unaccustomed warmth burned through the core of cold indifference that he had been holding on to. Christ, it was all over, all over. They would get him now with their Senior Citizens' Home and all the rest, he was good as dead.

There are some things that don't bear thinking about. This was one. Another double whiskey followed the first, the money for this was no longer important because he would be earning no more after this week, and the unusual dose of alcohol blurred some of the pain. Now, before he started thinking about it too much, he had to get back to the office. Clean his personal junk out of the taboret and pick up his pay check from Miss Fink. It would be ready, he knew that; when Martin was through with you he liked to get you out of the way, quickly.

"Floor please?" the voice questioned from the top of the elevator.

"Go straight to hell!" he blurted out. He had never before realized how many robots there were around: Oh how he hated them today.

"I'm sorry, that firm is not in this building, have you consulted the registry?"

"Twenty-three," he said and his voice quavered, and he was glad he was alone in the elevator. The doors closed.

There was a hall entrance to the studio and this door was standing open, he was halfway through it before he realized why—then it was too late to turn back. The Mark VIII that he had nursed along and used for so many years lay on its side in the corner, uprooted and very dusty on the side that had stood against the wall.

Good he thought to himself, and at the same time knew it was stupid to hate a machine, but still relishing the thought that it was being discarded too. In its place stood a columnar apparatus in a grey crackle cabinet. It reached almost to the ceiling and appeared as ponderous as a safe.

"It's all hooked up now, Mr. Martin, ready to go with a hundred percent lifetime guaranty as you know. But I'll just sort of preflight it for you and give you an idea just how versatile this versatile machine is."

The speaker was dressed in grey coveralls of the exact same color as the machine's finish, and was pointing at it with a gleaming screwdriver. Martin watched, frowning, and Miss Fink fluttered in the background. There was someone else there, a thin young

girl in a pink sweater who bovinely chewed at a cud of gum.

"Let's give Mark IX here a real assignment, Mr. Martin. A cover for one of your magazines, something I bet you never thought a machine could tackle before, and normal machines can't . . ."

"Fink!" Martin barked and she scrambled over with a sheet of illustration board and a small color sketch.

"We got just one cover in the house to do, Mr. Martin," she said weakly. "You okayed it for Mr. Pachs to do . . ."

"The hell with all that," Martin growled, pulling it from her hand and looking at it closely. "This is for our best book, do you understand that, and we can't have no hack horsing around with rubber stamps. Not on the cover of *Fighting Real War Battle Aces.*"

"You need not have the slightest worry, I assure you," the man in the coveralls said, gently lifting the sketch from Martin's fingers. "I'm going to show you the versatility of the Mark IX, something that you might find it impossible to believe until you see it in action. A trained operator can cut a Mark IX tape from a sketch or a description, and the results are always dramatic to say the least." He seated himself at a console with typewriter keys that projected from the side of the machine, and while he typed a ribbon of punched tape collected in the basket at one side.

"Your new operator knows the machine code and breaks down any art concept into standard symbols, cut on tape. The tape can be examined or corrected, stored or modified and used over again if need be. There—I've recorded the essence of your sketch and now I have one more question to ask you—in what style would you like it to be done?"

Martin made a porcine interrogative sound.

"Startled aren't you, sir—well I thought you would be. The Mark IX contains style tapes of all the great masters of the Golden Age. You can have Kubert or Caniff, Giunta or Barry. For figure work—you can use Raymond, for your romances capture the spirit of Drake."

"How's about Pachs?"

"I'm sorry, I'm afraid I don't know of . . ."

"A joke. Let's get going. Caniff, that's what I want to see."

Pachs felt himself go warm all over, then suddenly cold. Miss Fink looked over and caught his eye, and looked down, away. He clenched his fists and shifted his feet to leave, but listened instead. He could not leave, not yet.

". . . and the tape is fed into the machine, the illustration board centered on the impression table and the cycle button depressed. So simple, once a tape has been cut, that a child of three could operate it. A press on the button and just

stand back. Within this genius of a machine the orders are being analyzed and a picture built up. Inside the memory circuits are bits and pieces of every object that man has ever imagined or seen and drawn for his own edification. These are assembled in the correct manner in the correct proportions and assembled on the collator's screen. When the final picture is complete the all-clear light flashes —there it goes—and we can examine the completed picture on the screen here." Martin bent over and looked in through the hooded opening.

"Just perfect isn't it? But if for any reason the operator is dissatisfied the image can be changed now in any manner desired by manipulation of the editorial controls. And when satisfied the print button is depressed, the image is printed on a film of re-usable plastic sheet, charged electrostatically in order to pick up the powdered ink and then the picture is printed in a single stroke onto the paper below."

A pneumatic groan echoed theatrically from the bowels of the machine as a rectangular box crept down on a shining plunger and pressed against the paper. It hissed and a trickle of vapor oozed out. The machine rose back to position and the man in the coveralls held up the paper, smiling.

"Now isn't that a fine piece of art?"

Martin grunted.

Pachs looked at it and couldn't take his eyes away: he was afraid he was going to be sick. The cover was not only good, it was good Caniff, just as the master might have drawn it himself. Yet the most horrible part was that it was Pachs' cover, his own layout. Improved. He had never been what might be called a tremendous artist, but he wasn't a bad artist. He did alright in comics, and during the good years he was on top of the pack. But the field kept shrinking and when the machines came in it went bust and there was almost no spot for an artist, just a job here and there as sort of layout boy and machine minder. He had taken that—how many years now? —because old and dated as his work was he was still better than any machine that drew heads with a rubber stamp.

Not any more. He could not even pretend to himself any more that he was needed, or even useful.

The machine was better.

He realized then that he had been clenching his fists so tightly that his nails had sunk into the flesh of his palms. He opened and rubbed them together and knew that they were shaking badly. The Mark IX was turned off and they were all gone: he could hear Miss Fink's machine takking away in the outer office. The little girl was telling Martin about the special supplies she would need to buy to

operate the machine, and when Pachs closed the connecting door he cut off the grumbling reply about extra expenses not being mentioned.

Pachs warmed his fingers in his armpits until the worst of the tremors stopped. Then he carefully pinned a sheet of paper onto his old drawing board and adjusted the light so it would not be in his eyes. With measured strokes he ruled out a standard comic page and separated it into six panels, making the sixth panel a big one, stretching the width of the page. He worked steadily at the penciling, stopping only once to stretch his back and walk over to the window and look out. Then he went back to the board and as the afternoon light faded he finished the inking. Very carefully he washed off his battered—but still favorite —Windsor & Newton brush and slipped it back into the spring holder.

There was a bustle in the outer office and it sounded like Miss Fink getting ready to leave, or maybe it was the new girl coming back with the supplies. In any case it was late, and he had to go now.

Quickly, before he could change his mind, he ran full tilt at the window, his weight bursting through the glass, and hurtled the twenty-three stories to the street below.

Miss Fink heard the breaking glass and screamed, then screamed louder when she came into the room. Martin, complaining about the noise, followed her, but shut up when he saw what had happened. A bit of glass crunched under his shoes when he looked out of the window. The doll-like figure of Pachs was visible in the center of the gathering crowd, sprawled from sidewalk to street and bent at an awful angle as it followed the step of the curb.

"Oh God, Mr. Martin, Oh God look at this . . ." Miss Fink wailed.

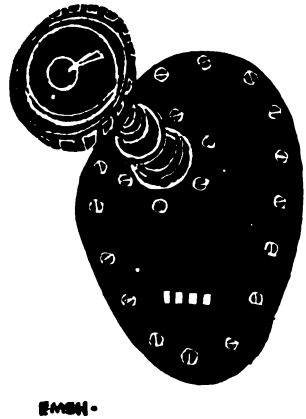
Martin went and stood next to her in front of the drawing board and looked at the page still pinned there. It was neatly done, well drawn and carefully inked.

In the first panel was a self portrait of Pachs working on a page, bent over this same drawing board. In the second panel he was sitting back and washing out his brush, in the third standing. In the fourth panel the artist stood before the window, nicely rendered in chiaroscuro with backlighting. Five was a forced perspective shot from above, down the vertical face of the building with the figure hurtling through the air towards the pavement below.

In the last panel, in clear and horrible detail, the old man was bent broken and bloody over the wrecked fender of the car that was parked there: the spectators looked on, horrified.

"Look at that will you," Martin

said disgustedly, tapping the drawing with his thumb. "When he went out the window he missed the car by a good two yards. Didn't I always tell you he was no good on getting the details right?"



HAG

Walking home that night I saw the witch,
crooked as a broken branch,
her face a dance floor for crows,
a monoxide breeze ruffling her indefinite rags.
Seeing me, she turned from her pentagram
traced in concrete
and hurled a hex, an impotent pox
unmutated for a millenium, a fossil disease
vulnerable to my vaccination.
The crone, likewise exposed to the times unprotected,
contracted autoskepticism
and stretched out full length
on a hopscotch diagram, dead.

—Russell E. Letson, Jr.

Richard Olin, making his first appearance here, has made his first appearance as a Science Fiction author in Analog, *and, as a poet (many times) in* Galley Sail Review. *He says: "I am thirty, and small for my age. Have worked for several newspapers. My wife, child, and I live in San Francisco. Among many less interesting pursuits, I have been at different times an amateur bullfighter and an Air Force epedemiological technician." Perhaps it was whilst engaged in this last occupation that Mr. Olin perceived the germ of this story; perhaps not. It is logical, interesting, and perhaps not just a little bit disturbing—and if you know anybody who knows any flatworms . . . watch out!*

OVERSIGHT

by Richard Olin

THE SHORT, PLUMP CARCASS OF Doctor Barstow, biologist, seemed an unlikely vehicle indeed for Earth's newest superman. He absently drummed his finger tips on the desk top—but stopped instantly when a spray of glass slivers shot up from the desk topping.

"I'm sorry," he mumbled to his superior, Dr. Petticrewe. "I keep forgetting." He brushed glass dust from his unhurt fingertips.

Dr. Petticrewe, head of the university's biology department, was waspishly unimpressed. "Your unauthorized research with flatworms, Dr. Barstow, has cost my department twenty-eight thousand dollars. Since you proceeded on your project without my knowledge *or* permission, I am well within my right should I choose to regard *these* —" he waved a sheaf of stamped invoices and bills from various drug houses — "as your own privately incurred debt. It is also well within my power to ask for your immediate dismissal.

"Now. I wish to know instantly what you have done with that money!"

Doctor Barstow's face was open and cherubic. He blinked at his superior with eyes that were blue innocence. "What I did with the money? Why, that should be obvious from the bills in your hand. I spent it."

"But how did you spend it? For *what?*"

Doctor Barstow blinked again. "To discover how planarians regenerate, of course. Don't you ever read any of the reports I send you?" He got up from the desk and obtained a small dish from one of the lab tables. He placed it on the desk between them. It was nothing more spectacular than a saucer filled with water. At the bottom of it, small arrow headed flatworms crept over the dish's sides.

"They're absolutely fascinating," Barstow said enthusiastically. "And since they have a notochord, they are much closer to us, physiologically, than one would at first think.

"Cut one of these worms into thirty pieces, Doctor. And do you have a hash of dead worm? No! Each tissue block regenerates and, in a few days, you have thirty miniature planarians! Give them nutrients and each grows to a full sized adult!"

He rushed on before his superior could so much as open his mouth. "But you wish to know what is the point. It is this: these are chordates, only one evolutionary step below us, the vertebrates. But do we possess even a fraction of this power to regenerate? We do not.

"But how do you know? Mightn't the power exist in our bodies—but be latent, undeveloped? Perhaps it needs only a slight chemical stimulus to release it. What then, Doctor, what then?"

Dr. Petticrewe's face was a map of conflicting emotions. Obviously, he was interested despite himself. "And this has been your line of research?"

"It was. Up until I found the answer." Barstow strode over to the lab bench and picked up a diamond wheel. "There was an unexpected side effect. But watch."

Using all his might, he pressed the wheel down on the palm of one hand. After a tremendous effort, he managed to open a small gash in the flesh. He wiped the few drops of blood away.

"Look quickly." He held the injured hand out to Petticrewe.

He watcher, speechless, as the edges of the cut sealed themselves together. In less than a minute there was no trace that the injury had ever existed.

It was much more than a minute before he could speak. "But—but why . . .? he nodded helplessly at the diamond wheel.

"Why diamond?" The plump little doctor smiled and threw the tool back on the lab table. "As I said: an unexpected side effect. My body tissues—" he flexed the fingers on a hand—"are perfectly flexible. But their tensile strength is somewhat tougher than structural steel." His smile broadened.

"It makes life somewhat awkward." He picked up a set of shears, razor-sharp, made of high-carbon blue steel. "Even with these, cutting my nails is an arduous task."

He proceeded to demonstrate, slipping the shears over each nail and bearing down. The separated clippings he placed methodically in a deep lab dish on the desk.

Dr. Petticrewe was on his feet, mouth open.

"But Barstow, this is fantastic! Revolutionary? No, sheer genius!"

Carried away, he seized the front of Barstow's lab coat. "You must publish immediately, Doctor. The impact on medicine, the fame of the university—Man, listen to me! Where are your research papers?"

Dr. Barstow's eyes were open, blue innocence. "Why, I burned them, of course." His glance fell on Petticrewe's hand, still clutching the front of his laboratory smock. "Would you mind?" He gently disengaged the hand.

Petticrewe yelped, then, incredulous, stared at his rapidly swelling hand.

"Sorry," Barstow mumbled. "I must remember not to be so rough." He shrugged out of his lab smock, placed it neatly on the rack and put on his street coat.

"Barstow! Where are you going?"

The plump little doctor smiled. "Why, I thought it was obvious. Out to enjoy myself, of course. After all, what on earth is there to stop me?"

Speechless and terrified, Petticrewe watched as the plump cherubic master of earth walked out the door.

Nor was he particularly happy, a few days later, when he did find the force that would eventually stop Dr. Barstow's supreme reign on earth.

It was in the lab which had been left unused and unvisited since Dr. Barstow left. At the bottom of the deep bell jar that had held the doctor's fingernail parings, Petticrewe watched with mounting horror as ten miniature Dr. Barstows jumped and clambered and shrilled in their attempt to get out.

The First Days Of Space Travel, which once seemed as remote or improbable—impossible as The Grecian Kalends or The Conversion of the Jews, are now right here. There is little, it might seem, which Fiction can say about them when Fact speaks continually. This story, nevertheless, has *something new to say, and says it plausibly and in a warm and human fashion. Here is Bob Carter, primed and readied for this different kind of space travel and, at the verge of the* rien ne va plus *age of forty, in danger of being plucked . . . unless, for his own reasons, he plucks himself, first. Here is Clara Weston, of the different talent, at the age of eighty facing great dangers distant and close. Man-on-Earth has already by these different (yet not absolutely different) means obtained* two coordinates. *The third one obtained—when?—or* if?—*it will see Man-Set-Free-of-Earth. And, meanwhile . . .*

THE THIRD COORDINATE

by Adam Smith

THE BRIEFING FOR TRANSIT XIII was held in the Narco Center. Inevitably Justin Prosser had taken over the meeting after the first five minutes of the military's attempt to keep it formal. "We've been through all this before!" he burst out. "Bob and Clara aren't going to learn anything they don't know and I don't know what you're talking about anyway."

Clara Weston and Bob Carter exchanged scarcely perceptible smiles. Clara dropped her eyes to her knitting. Carter decided it was a moment for tact. "Say, Justin," he offered, "what do you say Orion and I and the rest of the boys go over the flight plans later? I know there's some things you have to say, so why don't we hear you out first?"

The fat man glowered. "Hear me out? Don't any of you read the newspapers? You all talk about this as though it were some sort of technical exercise!" He picked up a newspaper from the table before him and rattled the headlines at

them. "Don't you understand people are starving to death? Maybe nobody you know, but it's going to get to us in time. And I don't want any jokes about me being fat, either!" he said, his neck reddening. "It's serious. It's why we're here! Not to talk about trajectories and velocities and orbits."

Orion Eliot, Carter's alternate for Transit XIII, grinned broadly at Prosser's antique terminology, and suppressed it quickly. Carter was soothing: "True enough, Justin. We tend to get absorbed in the technicalities and forget our goal, but this is our immediate problem. Unless Transit XIII is a success we're not going to have a third coordinate, and until we have that we're trapped here on earth and people are going to go on starving."

Justin Prosser tilted back in his big chair with a sigh. "Yeah, I know, I know. We all know. I get impatient. It's been fifteen years since Transit I. Some of you are hardly old enough to remember that." He glanced at Orion. "When Bob Carter came back that first time we thought we had it sewed up. And we're still just where we were."

"Well, not quite," Carter suggested.

Prosser waved an impatient hand. "I know. We've got two coordinates but until we get a third a heluva lot of good it does us. Excuse my language, Clara. Four blanks in a row and then Buzz lost last time."

Clara Weston, matriarch of the Hypnoid Project, stopped her knitting and looked up quietly. "I don't really believe that was my fault, Justin," she murmured. "Lieutenant Barlow threw off contact. I should have foreseen that it might happen but I cannot truly blame myself."

Prosser sighed once more. "No one's blaming you, Clara, but let me speak frankly, if you don't mind. After all, we all know your age and I'm sure you're not sensitive. But you've gone through twelve gruelling experiences in these fifteen years."

Clara dropped her eyes to her knitting once more. "With Bob I'm sure I can do it," she said.

Prosser shifted his eyes to Carter. "What about you?"

"I'm in as good shape as some of these younger guys," Carter growled.

Orion Eliot grinned. "You tell 'em, general," he murmured.

Prosser fiddled with a pencil. "Bob's right about one thing. We do have something to show for all my sweat and your blood and tears. We have those two coordinates. Just one more! One more! We know that there are green worlds out there in the stars waiting for us. Worlds where men can live. But now we're jumping in the dark into a bottomless pit. We have to know where we're go-

ing to land. You know how we've set up the transit this time. Right into the heart of our own galaxy. I won't dwell on the dangers. I'm sure Bob knows what they are better than I do. What I really want to say—Bob, Clara, everyone—good luck and God be with you. With all of us."

Prosser pushed his bulk up from his big chair. "Okay, I'm going now. I'll let you guys talk math gobbledegook to your hearts' content. Come on, Clara, you don't understand this stuff either. Have the sergeant bring my chair back to my office."

After a long afternoon's technical briefing Carter drove alone to his home in the mountains above Boulder and the Narco Center. As they were finishing dinner his wife, Margaret, who had been ominously silent, spoke up. "You can't," she said, throwing down her napkin. "Not again. It's not fair. They've got younger men. What's the matter with Eliot? He's always joking about it. Let him go!"

"He's expecting a baby almost any day. Or Betty is."

Margaret's face promised tears. "He's expecting a baby indeed! You've got three of them. Your results were way down on the last physicals. They shouldn't ask you to go up and try to kill yourself."

"Oh, well now, I'm not planning on killing myself after all. I've transited twice already and I'm still intact. As for my tests," he went on, feeling an ominous stir of anger in himself, "they're not all that bad. They're damn good for a guy thirty-nine years old. And it's the last time. Forty's the deadline."

"The deadline! That's a good word for it." The flare of anger in her eyes was the same that had delighted and half-intimidated her husband years before. At this moment, fortunately their two oldest children, the boys, came wandering into the room. Margaret glanced at them. "Roger! Pull up your pants! They're going to fall off you! How many times do I have to tell you?" Then, without warning, she jumped up and ran from the room, her hand to her face.

Hitching up his shorts with a guilty air, Roger looked at his father. "How come Mom's sore? Because you're going up again?"

"No, because your pants are falling off." Carter stirred his coffee thoughtfully, thankful at least that he had not told Margaret he had volunteered for Transit XIII and been dubiously accepted by Justin Prosser.

Roger grinned uncertainly and threw himself into his mother's chair, setting to work at once on her untouched cherry cobbler. He glanced at his father from beneath the thatch of blond hair that hung over his forehead. "The guys all said you wouldn't get it

because you were too old," he offered between bites. "I said, 'Hell, my old man's transited twice already. He could go up a dozen times.' "

"Watch your language," Carter said. "And I'm not your old man, I'm your father. But thanks anyway for the plug. Flipper, will you please not lean on me quite so heavily?" He looked around at the younger boy, who was propped against his father's shoulder. Philip shifted his weight a trifle. "Dad," he asked speculatively, staring out the open doors at the blue-grey vista of mountain ranges, "is it true that you were the first real spaceman?"

Roger was disgusted. "Jeez! Spaceman! Dad wasn't ever a spaceman."

Philip was a little indignant. "Well, how come you're such hot stuff then, Dad? How come the President came to see you last summer when I was at camp?"

Roger, having finished his second dessert, grabbed his head and rocked back and forth in dismay. "Don't they teach you guys nothing? Last summer was the fifteenth anniversary of the—" He took a deep breath. "—the first manned hyperspatial hypnotemporal transit."

His father whistled softly between his teeth.

"Didn't I get it right?" Roger asked aggressively.

"Absolutely right. And the President said you were a fine young man and asked you if you played football."

"Aw." Roger was suddenly overcome with embarrassment.

Philip, still leaning against his father's shoulder, turned from his survey of the mountains. "What does manned hyper—what does that mean, you know. You go up in a rocket. How come you're not a spaceman? Tell me again." He stared at the ceiling, prepared to understand and remember.

Roger had recovered his self-assurance. "I'll tell it, Dad. I had to give a talk in class. I didn't know what to talk about so old Barton said why didn't I talk about you and the Hypnoid Project and all the transits. I read all about it. First they sent these machines through the time gap and none of them ever came back so they figured you wouldn't come back either. Only Dr. Schachter said the reason the machines didn't come back is because there was no controlling intelligence accompanying them, that they really didn't have any brains, the computers lost contact with reality on the other side. He said someone would have to go with them and there would have to be a hypnoid control on this side, and then they found Mrs. Weston and you were the first to transit and she was the control. But nobody was sure what would happen." He finished breathless.

Philip was staring wide-eyed at his older brother. He decided now he did want to sit on his father's lap and climbed up and lay back against the crook of Carter's arm. "Hey, Rog, what did you say about Dad?" he wanted to know.

Roger was embarrassed again. "Oh, I said you were a good joe only like when you were mad about something, or me and Flip started yelling in the back of the car when you're driving."

Philip giggled in appreciation, glancing up at his father's face. "This must have been a very interesting talk," Carter smiled. "What did you say about Mrs. Weston?"

"I'm going to tell about that. They figured there had to be a control on this side that would keep contact with the transit. That was Mrs. Weston. They tested millions and millions of people before they found anyone that was as good at it as she was. Now she's eighty years old and she's going to be your control on Transit XIII."

"I saw her! I saw her!" Philip shouted. "On television. I knew who it was. She stood and waved to the cameramen and then she went inside. That's where they put her to sleep."

"Yeah," said Roger, obviously prepared to add the clinical details. "They keep pumping dope in her and then she stops eating and they feed her through her veins and when the rocket is ready and the transit is about to begin they wrap her in a rubber sheet and stick her in a big tub of oil."

Philip made a disgusted face. "Her head and all?"

"Her head and all," said Roger with gusto.

"Can you read each other's minds, Daddy?" Philip wanted to know.

Carter smiled. "Sort of."

"What's she thinking now?"

"She's worried. Well, never mind about that. How about the rest of the story, Roger? Why do we really make the transits?"

"I know," Philip said. Carter looked down at him quizzically. "You do? Why?"

"To 'stablish coordinates."

Carter laughed. "I'll be darned. I sure got a couple of smart kids."

"That's right," Roger said. "You established the first coordinate on you second transit. The computers and viewers were able to recognize the Coalsack Nebula even though it was millions and millions of light years away. And then Major Bronstein's transit recognized the Milky Way. Now if we get one more we may have controlled transits. That's why they're aiming you right into the heart of the Milky Way, so the computers will be able to tell where they are. That's why it's so dangerous this time," he finished.

"Could you burn up, Daddy?" Philip asked.

"Oh, there's not much danger of that." Carter glanced down at his hand. The scar was still faintly visible. Stellar sunburn, right through the walls of his ship, still a dark stain after all these years. He coughed and looked up. "Hey, hello there!" His daughter, young Margaret, was standing at the door, pink and starched, all six years of her. "Well, Miss Prim, what can we do for you?"

"Mummy's crying," Miss Prim announced. "She said you were mean to her."

"She did, huh? Well, I guess I better go upstairs and make up. Hey, Flipper, wake up, buddy." Philip's eyes were clenched in mock sleep. "Well, I guess I'll have to carry this sleepyhead upstairs and put him to bed." Philip refused to be frightened awake by this threat. Carter arose with the child in his arms and carried him from the room and upstairs.

The conciliatory interview with Margaret did not go well. She proved surprisingly resistent to Carter's attempts to placate her and the temper that they were both capable of had risen in them till their heads were thrust at one another in classic fury. Then they both backed down, ashamed of themselves but not quite relenting. Carter, to his surprise, heard himself offering to withdraw from the transit. It would, he said, be simple enough to tell Prosser he wished to withdraw for "medical reasons," and there would be no embarrassment. Margaret, in turn, declined to accept any promises. "No," she concluded, "I don't want any promises. I know that an awful lot depends on this transit, maybe even the future of mankind. I'm not a fool. It's just that I don't think all the responsibility is yours. Or mine. We live and die in peace. We'll never starve and the children will never starve."

The atmosphere at breakfast the next morning was tense, though Margaret moved through her morning chores with apparent placid good nature. Roger had been promised that he could accompany his father on a visit to the Narco Center to visit Mrs. Weston. Carter wondered if perhaps he had better not tell Roger that the trip was off for him. The boy was bubbling with the trip, and Margaret made no comment upon it.

"All set?" she asked, wiping her hands on her apron as they prepared to leave. "You won't forget to give Mrs. Weston my love? Though goodness knows if she can read my mind she'll take it with a grain of salt. She won't know you, Roger. It's been two years at least. Pull your pants up! You might buy him a pair of pants that fit while you're in town," she added.

The Narco Center was on a

pretty stretch of road near Boulder, where the mountains start to compromise with the plain. An unidentified, rambling, one-story building amid irrigated green lawns and willows, it looked like a not very large industrial research center. This effect was somewhat belied by the high, matter-repellent fence and the military guards at the entrance.

An MP corporal sauntered up to the car when Carter cushioned to a halt before the gate. "This is a government installation, sir," he began in a bored voice, stooping to peer into the ground-effects car. "No one but authorized personnel are—" His voice slowed to a halt. "Oh. Excuse me, sir. I mean general!" He flustered himself into a salute and hurriedly signaled the sentry box to release the gate.

"How come you're not wearing your uniform, general?" Roger whispered as they glided through the gates and toward the main entrance of the Narco complex.

"Oh, too conspicuous I guess."

"I bet you like it when they snap-to though, don't you?"

Carter darted a look at the boy. "Like father, like son," he murmured. Their unannounced arrival created a flurry at the reception desk and Carter put Roger in the hand of a young narco-technician for a guided tour of the installation. Carter allowed a pretty receptionist to escort him to Mrs. Weston's suite. She flirted blushingly with him on the way. He *did* enjoy the whole thing very much, he thought, smiling at the girl and her playful banter. They stopped outside the door of Mrs. Weston's suite.

"Thank you very much," he said. "You won't have to announce me. Mrs. Weston knows that I'm here."

"She-she what? But we didn't —oh, yes. Yes, I see. She *would* know, wouldn't she?" She left, looking somehat confused. Carter tapped on the door and entered.

Clara had indeed realized he was approaching and had risen to greet him when he entered. They embraced affectionately. "My big boy!" she laughed, looking up at him.

"Glad to hear you say boy," he grinned back. "Everybody's been telling me how old I am."

Clara Weston was sixty-four years old, a widow with five grandchildren, when she took the Schachter Psychic Perception Tests at the insistence of her family doctor, who had known her all her life and been impressed by her youthful "parlor games" facility for identifying unseen people. Her odd talent had proved so unsettling eventually to her that she abandoned her "tricks" and pretended they had been merely that.

Many years later when she was persuaded to take the SPP Tests

the first results were completely negative. It was only with great difficulty that a Schachter Team was persuaded to examine her on a more intimate basis at home. To Clara's great dismay less than two weeks later she was in a military hospital under guard, and being put through a battery of tests that bewildered her. "A built-in directional finder!" Schachter himself cried, smiting his forehead.

A final discovery threw the testers into an uproar. Distance or intervening matter was quite irrelevant to Clara's facility. A young Lieutenant Petersen, with whom she had been deliberately acquainted, was put into orbit around the earth. Clara, under the heavy sedation which sharpened her abilities, sat in a darkened room with only Schachter and a nurse for company. For some time she was apparently confused. "He comes near and then he goes away," she murmured with a little frown. "Far and then near." Then there was a gradual clearing of her face and her sweet smile. "Why, I do believe Lieutenant Petersen is circling the earth," she said. "Imagine that!"

The Little Old Lady Who Can Read Minds was now a world figure who had accepted her fame with calm after her initial panicked reaction. She had acted as control on the twelve previous Transit flights, with only the death, or "disappearance", of Buzz Barlow on Transit XII to mar her perfect career. This would be her final meeting with Carter before their attempt at Transit XIII.

"Don't go," Carter said to Clara's daughter, herself a grey-haired spinster of nearly sixty, but she smiled deprecatingly and slipped silently from the room. Carter and Mrs. Weston seated themselves with the comfortableness of the intimate in Clara's chintzy, sun-bright sitting-room. "You're worried, aren't you?" Clara asked after they had exchanged a few remarks.

Carter nodded. "You too."

She admitted as much with her hands, which were nervously smoothing the chintz over the arms of her easy chair. "I should ask this, first of all," she said. "Is it about me?"

"You. Of course I'm worried about you. Is that what you mean?"

"No, that's not quite what I mean," she said softly.

Carter stared. He realized with a little shock that her eyes had a slightly glazed look. They had already begun the drugging process that would sink her into an almost vegetable torpor in a matter of days. "Do you mean am I worried about relying on you, Clara? Of course not. We began this together, you and I, and I want to make my last run with

you. We're the ones who got our feet in the door out there and I think we're going to be the ones that throw that door open wide."

Clara pursed her lips. "That's very kind of you, my dear. But you know this will be my—my last run, too. There's no blinking it. Time is inexorable even in the brave new world we have glimpsed. I am very old. And you know what happened last time."

"Buzz should never have gone up in the first place, you know that, Clara. He lacked confidence."

"Confidence is very important, to be sure. Frankly, Robert, I am not afraid of death, not at my age. But it isn't only my life that is at stake. To me you are still a boy, with your whole life ahead of you."

Carter leaned forward with his elbows on his knees. "Clara, I'll admit I'm worried. I'm worried about both of us. I almost promised Margaret last night I'd pull out. Should I? Should we both?"

She sat quietly now, all traces of her earlier nervousness gone. "No," she said finally. "No, I don't think we should give up. We should make this last try together." She was silent for sometime. "You know, Robert, I am a religious person in a way that probably seems old-fashioned to you. You remember years ago when we were first famous and there was talk of Providence working through us? I was embarrassed at the idea then, even shocked, but of late I have been reflecting more and more on it. How else could we have been instrumental in this work which my poor brain scarcely begins to comprehend? Perhaps it is destiny, a destiny that I share with you. Shall we accept it?"

Carter's eyes were distant. He brought them back to her. "Yes, Clara, we must. Maybe we're not as far apart in our philosophies as you think. I don't think we, of all people, could presume to judge the architecture of the universe. We've seen too much not to know how weak our vision is."

Clara's eyes took on some of their old strength and clarity. "You are a brave man. I like to think I share some of that courage." She smiled her old smile. "There is only one other thing I wanted to say before I call Ella back with the tea things. If by any chance we should never see each other again I want you to know that you have been very dear to me." Carter reached forward and put his hand over hers. She patted it affectionately. "Now!" she said briskly, "we must get back to mundane things like lunch. I've especially ordered ice cream and cake for Roger, if he's not too manly for such things."

Project Transit was nominally under the jurisdiction of the Air

Force but it had in actual fact been run for fifteen years by Justin Frederick Prosser who had never been in a uniform in his life. He had come into the program as a protege of Schachter's and gradually taken control of the entire massive organization right down to the polish on the MP's shoes. His success was a mystery and an annoyance to many, and the subject of profound speculation even on the part of his friends.

As a widower for some years Prosser was truly married to his job. His office in the Narco Center was his home and he ran things there and at the missile base with electronic tentacles and endless telephone calls and personal forays from the Commandant's office down to the mess halls. The military accepted him wryly but with caution because more than one top-ranking officer had found himself mysteriously floated away to a new assignment after Justin Prosser phoned the White House.

Carter's visit to Prosser's tiny office began in typical fashion. The attractive WAC sergeant who served as Prosser's secretary greeted Carter with a smile and a hopeless shrug. "He knows you're here, General," she said, "but there's no use buzzing him. He's been on the phone to New York for the last hour about some filing cabinets. They're the wrong color and he's furious. Why don't you just go on in?"

Carter pushed his way into Prosser's office. The door was partially blocked by the offending filing cabinet, which was appreciably lighter in color than the others in the room. "What do you mean, darken with age?" Prosser was shouting apoplectically into the phone. "They ain't Rembrandts. No, of course they've never been washed! Don't I have enough to do?" He put a hand over the receiver. "Be right with you, Bob," he said in a voice of the utmost calm.

Carter seated himself on a plain wooden chair that looked as though it had been borrowed from someone's kitchen many years before. After a final agitated scream into the phone, Justin hung up and swiveled to Carter. "Gee, it's good to see you, Bob," he said, calm once more. "You've talked to Clara? I played a couple of hands of gin with her last night. What did you think?"

"Fine, Justin, she seemed fine to me. Very alert and confident."

"Confident?" Prosser made an elaborately dubious face, dragging in his double chins. "I wouldn't say that. Alert? Well, perhaps."

Carter frowned. "I did think she was rather quiet, as a matter of fact, but I didn't know you'd already begun to narcothize her."

Prosser shook his head slowly. "We haven't. We haven't even given her the first shots." He was si-

lent for a moment, which was unusual in itself. "Bob," he said, "would you push that door shut. I can't get around there with that damn filing cabinet in the way."

Carter was startled. He could never remember Prosser wanting even minimal privacy in the fifteen years of their association. When Carter had reseated himself Prosser leaned back in his huge swivel chair and clasped his hands behind his neck, his chins multiplying as he did. "I'm pulling you, Bob," he said. "You and Clara too."

Carter sat stunned. He realized that his jaw was hanging open and closed it, still speechless. "Pulling?" he managed at last. "You can't!"

"Of course I can."

"My God, why? Why? You're not serious!"

"Why? Do I have to spell it out? You're too old, both of you. Yes, you too. Oh, you're in fine shape for a guy who stays on the ground but not for tootling around in the stars."

"Justin, you're crazy! I can still run rings around these kids, but that's not important. It's experience that counts. I've been on this merry-go-round twice! No one can say more than that."

Prosser nodded. "Experience you've got. I won't deny it. And I'll have to admit you're in a heluva lot better shape than I am." He waved his hand impatiently as Carter attempted to interrupt. "It's not that. If it were, I'd say go ahead, don't quarrel with success." He tilted forward suddenly in his chair and leaned his elbows on the desk. He rubbed his face vigorously before he looked up. "No, there's something else I'm worried about. Several things. Money, for example. Sometimes I act like I don't know what it is but I think about it a lot. I'm responsible—well, I won't go into that but you're smart enough to know I get plenty of pressures on me, even though I like to pretend I don't answer to anyone. I picked you for Transit XIII over Eliot because I thought you had the best chance, not because you're my buddy. But we've got to get new people into this. Hell! we might be trying for a third coordinate fifty years from now. I've got to look ahead."

Prosser threw up his hands. "I'm rambling like I always do when I've got something hard to say. Here's what I want to say. I'm pulling you because I don't think you've got it any more. You're scared."

Carter's face was tight and drawn.

Prosser looked at him intently. "There's a little truth in it, isn't there, Bob?" he asked quietly. "You're just very damned sensibly scared." A breeze from the window fluttered the corner of a paper on his desk.

"It's not for myself I'm scared," Carter said.

"What else? For Margaret? The kids? They're part of you, aren't they? That's just another way of putting it. You stayed younger a lot longer than I did, Bob. In more ways than one," he smiled ruefully, pulling at the wattle of flesh beneath his chin. "And how do I know what you're feeling? Once you'd have been in here every day fussing like a wet hen, this time I've hardly seen you. You were home, savoring life. And security."

"Justin, I don't want to make any sentimental appeal—"

Prosser raised a hand. "I've told you that wouldn't do any good. It really wouldn't. Don't embarrass both of us."

The muscles in Carter's jaw worked angrily. "All right! It's not sentimental. Let's put it this way —I damn well know I might get killed and I don't like it! I know I'm not as good as I used to be. Life is precious to me. To *me*. Not just because of Margaret and the kids. But they are something worth coming back to. Something that makes me determined to go even if I don't come back."

Prosser sat back with his eyes closed, an imperturbable Buddha. He jiggled almost imperceptibly in his chair. "You think determination is enough?" he asked without opening his eyes.

"Determination plus experience plus luck is all anybody can take out there and I've got it all on my side—more than anyone else!"

Prosser jiggled. He lifted his shoulders a half inch and let them drop. He opened his eyes. "Okay already," he said. "I just wanted to give you an out. I'm glad you didn't take it."

Carter exploded in angry laughter. "Justin, you *bastard!*" He jumped up, overturning his chair, righted it, and sat down again. "Pross, I'll be perfectly honest with you. I came here today almost determined to pull out on my own accord, but there never was any real doubt in my mind, even with Clara and you both asking if I wanted out."

"Clara asked you?"

"She was concerned about me, not about herself."

"Oh." He fumbled with some papers on his desk. "Well, now as to the transit itself. The eggheads have got you lined up on Persei II. That's pretty crowded territory as I see it and I'm damned if I see why we have to take a long chance on incinerating you. Hey, open that door, will you. I get claustrophobia."

Carter stretched to pull open the door. "Well, Justin, it's simple enough. Persei novaed a little more than a hundred years ago so we have a built-in time check, within a certain range."

Prosser raised a chubby hand. "Hold it. Ten years ago those pro-

grammers stopped trying to explain things to me when they discovered I thought a tangent was a bird. If you want to take a chance on broiling yourself it's all right with me. If not I'll tell them to map out something a little safer. So they'll scream and holler. Let them."

Carter shook his head. "No. No, this is the logical thing. We could bumble around for centuries being safe."

Prosser laughed. "I may not have quite as much hair on my head as you but I've got a lot more brains in it—some ways, anyhow. How's about lunch? You have? Dammit, so have I. Yogurt. I was hoping you'd provide me with an excuse for another trip."

Roger waited in the reception hall, hat in hand on a bench near the door, looking very small for all his thirteen years. On their way home Roger talked excitedly for a while of his tour of the Narco Center and then fell into an unusual silence. "Hey, Dad," he resumed after an interval, "I'm glad you're going up. That's what I'd do. That guy kept going on about how dangerous it was, like if this star Persia or whatever they call it was novaing when you got there. Well, anyway, you know, in case anything should happen I'll be fourteen pretty soon. I could take care of quite a bit."

"I know I can depend on you," Carter said. He cleared his throat. "Let's watch and see if we can spot those deer, what do you say."

The glance that Carter and Margaret exchanged when they arrived home said everything. Carter waited for some word of reassurance that did not come. That night in the dark he lay awake watching the curtain stir listlessly in the moon-chilled air. Toward dawn as he lay half asleep, vaguely aware of the morning cries of the birds, a red flower seemed to explode in his brain and he sat up in panic. "What is it?" Margaret muttered.

"Nothing. Go back to sleep." In the bathroom Carter stared at his reflection in the hard light. He was the grey of death.

The previous afternoon when Carter left the Narco Center Justin Prosser left his office and went churning his way down a long corridor, shouting greetings and/or imprecations at everyone he met. Outside Clara's apartment he took a deep breath before he rapped and went in. Clara looked up mildly from the book which lay unread on her lap. Her daughter slipped quietly from the room. "You've seen him," Clara said.

Prosser stood behind the couch, his knuckles on the library table. "Clara, I hope you know what you're doing. I've never taken a woman's advice in my life that I didn't regret it."

"I'm quite sure that I know what I'm doing," she said firmly. Her eyes softened. "Don't worry, Justin. You will have nothing to regret in the long run, I am sure."

"I don't want to have anything to regret at all. Period. I've conned that guy into insisting that he be allowed to go. I'll tell you what, if he doesn't make it I'll let you break the news to Margaret, how's that?"

"I might not be here to do it," she said softly.

They played cards as usual that evening, talking very little. When Clara complained of fatigue Prosser left early. Toward dawn Clara's personal physician at the Center was summoned by her daughter. Prosser was pacing back and forth in an ancient flannel bathrobe when the doctor emerged from Clara's bedroom. "Well?"

"Another slight cerebral embolism. I can't detect any imapirment of function but you know this means she's out."

"Out of what?" Prosser barked. "Did she say she wanted out? No? Then she starts tomorrow."

"I can't be responsible."

"I'm the only one who's responsible for anything around here! Start her tomorrow!" Prosser drew a hand across his brow. "Sorrv, doc, but that's the way it is. Maybe you'd better give me a little pill too. How'd I ever get this job in the first place?"

Bob Carter left home for the missile base three days before the scheduled blast-off. He attempted to make the occasion a casual one, driving Margaret and the children to Boulder where he was to meet his alternate, Orion Eliot. When he pulled to a halt beside the old court house there was the inevitable crowd of newsmen that descended on them like a flock of hungry birds.

Appleby of AP was leaning on the door of the car laughing and coughing before the rest reached them. "Hi, general," he gasped. "Hope you're in better shape than I am. How about that, Bob? Is it true that the docs thought you were a little too old this time? Hell, you're a kid!"

Prell of Worldwide thrust his serious face in. "Is it true that Mrs. Weston has had another stroke? Why is Orion Eliot prepping?"

"You know what odds the bookmakers are giving on your not coming through with a third coordinate?" Perko of Scientific Services.

"Hey, that doesn't sound very scientific!"

"Bookies make more money than scientists. Even money, general. They're giving you a 50-50 chance."

"I'll take some of that. Let's talk about something more cheerful." He pushed his way out of the car.

Hopkinson of the *Times*: "General Carter, how do you feel about

the possibilities of establishing a third coordinate on this transit?"

Betsy Parnie of the Denver *Post,* who had been interviewing Margaret for years and peddling the results throughout the world, slipped uninvited into the rear seat of the car as the children clambered out. "Hi, Marge," she gushed. "Gee, you're looking great, honey. Had a little touch-up, haven't you? Are you all excited? I wish I had a great big good-looking husband to get excited about, even if he was about to get knocked off. Oh, honey, don't mind me! you *know* I'm kidding."

The arrival of Orion Eliot took some of the pressure off Carter. After a cheery greeting to Bob and Margaret and a few moments of mock sparring with Roger, he took the newsmen on with his usual aplomb. "Well, sir," he began, ignoring all questions, "all I gotta say is I hope ole Bob don't conk out on me. I don't know how I got in this rat race in the first place, oney, I wouldn't say that if my Daddy wasn't about six hundred miles away. Don't put that in the newspapers, or he be right up here whumping me." He draped a thigh over the fender of the car. "Bob looks in fine shape to me." He punched Carter in the belly tentatively. "Oops! kind of soft there. Well, anyhow he ought to be good for another five years. Hell, man, ten!" Orion caught a glimpse of Margaret looking angrily from the car. He jumped away, throwing his arms protectively around his head. "Look out! I didn't mean it!" He moved out of earshot.

Orion drove out with Bob and Margaret to the heliport. The atmosphere was rather chilly since Margaret had never been able to tolerate Orion's sense of humor. He said good-bye to her hurriedly at the heliport and ran off toward his gaudy copter to await Carter. "Don't be too long, heah?" he called back.

Carter stood beside the car while Margaret slid over to the driver's seat. "He means well," Carter said. "He's just young. You'll be at the launch so I won't say good-bye now."

Margaret turned her face away. "No, Bob, I can't. I just can't. I know I'd break down. I'm sorry, I really am."

"I'm sorry too," Carter said shortly. He stood with his hand on the door of the car, peering into the breezy sunlight at the flurry of activity on the field as the newsmen prepared to take off for the missile base. "Good-bye, then, Marge." He stooped and kissed her briefly and walked off to Orion's copter.

Orion stopped by his room at the missile base that night before bedtime. He was in his underwear, barefoot and tousle-haired. In his hand he carried a rumpled newspaper. "You had your first shot yet? Well, you ain't going to lose

any sleep over this then."

Seated on the edge of his cot, Carter took the newspaper. "Spaceman's Wife Doubts He is Fit," the headline of Betsy Parnie's feature story said. And the subhead: "Children Show Effects of Strain."

Carter read angrily. "Damn that woman. She must figure we're not going to be copy much longer. I'd better call Marge and warn her." He reached for the phone and withdrew his hand. "I'll call her tomorrow, it's getting kind of late."

Orion had thrown himself into a chair and pulled his feet up from the cold floor, hugging them in his hands. He stared at Carter blankly. "Oh! You want me to go?" he asked putting one foot on the floor. Carter shook his head. Orion grabbed his foot again. "Bob," he said suddenly, "somethin' I want to ask you. Did you kind of diddle me out of this here ride?" Orion, his chin on his knees, cast him a sidelong glance, grinning slyly. "Bob, you lookin' kind of pink," he muttered. He raised his head and spoke clearly. "That's what I figured."

"I'm sorry, Orion. I tried to persuade myself that I was doing it at least partly for your sake, but I've had my eyes opened a little."

Orion tilted his head to one side reflectively. "You figure I really didn't want to go?"

"No, of course not. Everyone knows you're kidding."

"I surely do hope so. I joke about my Daddy a lot, too, but I hope don't nobody think I really mean it. Even if I *knew* I wasn't coming back I'd go anyway just to please my father. I'm probably the only guy in the world who likes to be called a name like Orion. I'm right proud of it." He stood up. "Hot damn, this floor is cold. I'll tell you the truth, Bob, I ain't going to do a lot of crying if you wash out, or if you back out, but I wish you luck. Good-night. General," he grinned as he pulled the door closed.

Despite the first narco-shot that he had received during the day Carter did not sleep well. During the night he had another disturbing dream. A black figure was standing in his closet behind the closed door. Carter struggled up from sleep, uttering harsh, deaf-mute cries, leaped from the bed, turned on the lights, and had flung open the closet door before he was fully awake. He returned to bed to lie awake for some time, his heart pounding. "Clara? Clara?" he asked soundlessly. "What is it? What is wrong?"

The next day Carter, and Orion as his alternate, began the process of narcothization in earnest. For them this was not so drastic an undertaking as for Clara. It was essential, for one thing, that they be fully conscious during the "instant" of transit and during the elapsed time on the "other side."

This elapsed time had now been reduced to something like two hours—all that was necessary for the mechanical eyes to scan about them and record the millions of bits of information Transit XIII would store in its tapes.

At this time, two days before the scheduled transit, Clara Weston, bundled against the enclosing chill, her lips paled to a cyanotic blue, had been removed to the hospital ward at the Narco Center. She was still sufficiently alert for two final visitors. The first was Margaret Carter. The two of them spent fifteen minutes alone. Margaret left white-lipped and silent. Later the same day Justin Prosser stopped in the dim room and sat silently in the chair beside her bed.

Clara's eyes opened. Her head moved a trifle. "Justin? Is it you?"

"Yes. Don't talk if you don't want to. I just thought I'd sit here for a few minutes where it's quiet and peaceful."

"It is, isn't it?" Little more than a whisper.

They were silent for some time. "You talked to Margaret," he said finally.

"Yes. I thought I must. It was only fair. She accepted it."

"And you? It's not too late. All you have to do is nod."

He thought for a while she was too far gone to reply, then he detected a faint negative movement of her head. He rose and stood beside her. "No." He leaned forward to listen. "I am doing the right thing. Good-bye, my dear friend."

The base now at night was a sweating glare of light, visible as a glow in the sky as far away as Denver. Transit XIII had been moved into place more than a month earlier but was still under its huge translucent white shed while the instrumentation engineers completed the installation of the sensitive viewer-computer mechanisms. The ungainly vehicle, looking a nightmare of disorganization and unreadiness, was not especially large, the above-ground portion a mere eighty feet in height. Below ground the conventional first-stage rocketry was set to go and the reactor for space-propulsion was sealed in readiness for operation with the automatic draining of the control fluids.

Outside the huge, pearly bubble of the shed the frenetic activity of the base was almost as marked. At this stage even those personnel on the base not directly connected with the launching became infected by the excitement. Supplies and equipment in conveyors moved endlessly, night and day, over the vast expanse of concrete surrounding the bubble. The administration buildings were ablaze with light from a thousand offices. The foreign observers' building was a Babel of tongues, a parade of strange costumes.

The control and computer centers hummed and throbbed with a thousand calculations and recalculations. The mathematics for the flight trajectory had been established in detail months before. The massive devices now were engaged in preparing amended figures for each possible five-minute delay in the planned blast-off. Hollow-eyed scientists and gaunt mathtechs and programmers downed gallons of coffee and surreptitious stronger drafts to keep themselves going somewhere this side of madness.

The Narco Center not many miles away was busy on a less frenzied scale. A few additional guards and lights burning through the night were the chief signs.

In a room that looked much like an operating theater, at the center of the complex, a group of doctors worked in silent haste over a green-draped form. At last they stepped aside, a nurse folded back the linen, and two orderlies gently lifted a surprisingly small burden. It was carefully lowered into a transparent vessel filled with a murky, viscous fluid. There were last-minute adjustments, the muffled, droning voices of the technicians reading aloud from their check-sheets, and the last of the attendants withdrew. The heavy door sealed shut, there was the suck of air being withdrawn, the lights dimmed to midnight nothingness. The figure floated in a limbo of darkness, connected to the world by the slenderest of links, wire sensors as fine and soft as hair but steely strong. Clara Weston was reduced to the faintest fluttering of cardiac, respiratory, metabolic, encephalographic dials.

In an adjacent room whose windows looked on a flowery quadrangle a group of doctors sat before an instrumentation panel that was nearly as complex as that for the transit rocket itself. Behind them, in his big chair which had been moved in for the vigil, sat Justin Prosser. At his side was a medical instrument table serving as an improvised desk. On it were two telephones, one a direct line to the missile base, beside it the latest bulletins on the progress of the count-down, and a neat stack of candy bars. Justin Prosser paid little attention to the dials on the instrumentation panel aside from an occasional glance. For the most part he stared out at the roses in the quadrangle, his own private cloister. At intervals he dozed and awoke with a start, reaching for the telephone or for a candy bar or fumbling in his pockets for a cigarette.

Carter and Eliot, already groggy with their soporific medications, watched the transit preparations unnoticed from inside the shed. Their skin in the harsh and glaring lights had taken on the bluish cast of the Hypnoid travel-

er, and they were wearing scarves and gloves even in the warmth of the summer night and the fetid heat of the enclosure. Eliot shook his head slowly. "Sure is a mess, isn't it?" he asked with a shadow of his toothy grin.

Cater nodded. "More complicated each time. Ever see Transit I?"

"My Daddy took me to see it when I was a little bitty kid in Florida. I don't remember much."

"When you were a kid! Has it been that long? Funny, it seems like yesterday."

"It sure flies. And speaking of flying, we better be getting back. They gonna want to pack you in early tomorrow. Don't look like I'm going anywhere."

"I'm sorry. I think I'd do it differently now."

Out of the din and clatter of the shed and under the beating pressure of the outside lights they walked to the edge of the brightness and on into the cool darkness beyond. The stars were visible above the serrated horizon of the mountains dimly outlined in the West. Orion Eliot looked up at the sky. "There are my stars," he said raising a hand. "The ones my Daddy named me after."

Carter sighed. "They may really be yours some day. I know now that they never will be mine. Our dreams always outreach us, don't they? They may be yours some day, those stars—or Roger's—but they won't be mine." He slapped his hands together bruskly. "Gee, it's cold out here! Let's get on it. Maybe Betty or Marge has phoned." They trotted off toward the lights.

In the foyer of the Prepping Building Orion's wife Betty, enormously pregnant, was waiting. Beside her stood Margaret. Carter's heart leaped. "Honey baby!" Orion shouted. "What you want to come down here for? I don't want no son of mine born on Army property. We got the virus bad enough in this family already!" She tilted forward, arms around his neck, to silence his protests. Orion steered her away tactfully over her protests.

Carter and Margaret walked outside to sit in the darkness on the steps. "I'm glad you came after all," Carter said.

"I guess I knew all along I would." She took his hand, removed the glove and held his hand between hers. "I was trying to bully you into pulling out. After all these years I should have known that doesn't work very well with you." They walked slowly, hand in hand, back to the visitors' quarters talking the commonplaces of home and children that is the vernacular of love, and Carter hurried back to the Prep Building whistling.

A final medical check-up was held that night. Carter was afraid his lightened heart was beating with an enthusiasm which might

disqualify him. "Is it still there, doc?" he grinned at the medic who stethoscoped him. The doctor did a reverse grin, the corners of his mouth turned down. "Oh, you ought to hold together for a few days."

He had had his breakfast, attended a final briefing with Orion, still theoretically in the running, and donned his cotton-light metallic coveralls before Margaret and the boys arrived. The experience was a familiar one to Roger but new to Philip, who stared about him wide-eyed at the array of strange devices and bustling men. It was some moments before he realized that the tall man in the shiny long underwear was his father. It did not, in fact, dawn on him until Carter stooped and picked him up.

Philip stared at the presumptuous stranger for a moment in consternation. "Daddy!" he shouted. "You *are* a spaceman!" Roger reddened in embarrassment and an attendant had to be slapped on the back repeatedly before he recovered.

"How about that, Flipper?" Carter laughed. "You want to come along?"

Philip was dubious. "I bet I can't."

Carter turned to Margaret. "We're a little behind schedule. I have to get in that big chair now, Flip. Do you want to watch? You can sit over there with Mummy and Roger." Carter kissed Margaret quickly. She clung to him for a moment. "Come back safe," she whispered. "We love you."

In the capsule Carter felt the effects of the drugs sinking him into a lassitude that washed away his tensions. Scarcely perceptible pinpricks in the sole of his foot would keep him at the same level until the point of transit was reached.

The capsule now was hoisted upright and dollied to the opening doors. The lift operator turned briefly so that Carter could wave through his transparent shield. Philip was too awed to wave back until Roger took his hand, whereupon he waved most enthusiastically of all. They were already very small and very far away.

The protective bubble covering Transit XIII had been deflated and the exterior covering halves of the rocket rolled into position to clamp together and weld themselves into a seamless whole. Workmen were still dismantling the scaffolding, clearing away debris, making last-minute adjustments. The din of the work carried faintly as far as the television cameras on top of the Prepping Building. The cameras followed slowly as the capsule moved across the apron. Margaret and the youngsters would be at the windows of the Commandant's office by now, out of sight to Carter as he hung suspended in space.

And now the capsule was being jockeyed into position by sweating workmen who rapped familiarly at the window and shouted barely audible cries of encouragement. There was a slight jar, a metallic clangor that rang in Carter's ears, and a cherry-picker crane had hooked onto the capsule and was lifting it high in the air. A gaping maw, then he was sliding into the innards of the rocket like a coin dropped in a slot. Utter darkness. Stifling heat. Carter had his invariable claustrophobic shudder before the capsule clicked firmly into place.

Mechanical hands, remotely controlled, began attaching him to the facilities of the rocket. There was the God-sent stream of fresh air, the soft glow of lights, the crackle of his radio connection. The dial at the glucose feed lit up, the eerie fingers of the medical perceptors felt at the nape of his neck like something alive until they found the socket in his suit, clicked into place and twisted themselves snug, already beginning to record his moment-to-moment medical history. The welcome necessity of technical exchanges with the flight director made the wait something less than the eternity it seemed.

At last there was the clicking silence of the last minutes, the falling away of the last earth connections, the faint reverberation as the shell halves clanged into position, the sudden flickering into life of the external viewer with all the bright colors and movement of the crowd in the clear afternoon sunlight. Margaret's voice, hardly recognizable. Philip shouting. Carter could not tell if they heard his farewell, was not quite sure he had spoken aloud. The final silence and tingling vibration that was almost sound as the monster came alive.

Margaret stood tensely in the Commandant's office, Roger beside her, unconsciously protective, Philip pressed against the window. There was only the sound of breathing on the communications system. The ungainly barrel of the rocket, forlorn out in the vast emptiness, did not at first condescend to notice that someone had tied a firecracker to its tail, then stirred itself sluggishly like an old dog struggling to its haunches. It barely lifted, poised itself motionless on an opalescent cloud that whitened to pearl. The huge, dizzily balanced craft pushed back against the feathery cloud, which now glowed red with effort—and a moment later the ugly duckling was a swan, soaring on mighty pinions into the sky.

Transit XIII had taken on the vitality and life of the thousand dedicated minds and hands that made it. It was air, pure spirit, streaking into the heavens.

At the Narco Center Justin Prosser lowered the green phone.

"How's it look, Mart?" he asked, looking at no one in particular.

One of the medical men at the panel rose from his chair and walked backwards, eyes on the instrumentation. "Oh, all right, I guess. She's responded to the take-off pretty much as usual. Slight increase of activity all across the board. But there's that persistent pattern of irregularity in the ECG." He lowered his voice. "We're going to have trouble before this is over. Real trouble."

Prosser rubbed an irregular stubble of beard. He lay back in his big chair. "I'm going to try to sleep a little," he said. "Wake me if there's any change."

"We're going to have trouble with you if you don't get some rest."

"I said wake me if there's any change!" Prosser lay back with his eyes closed. After a while he turned his head toward the window, opened his eyes, and stared expressionlessly at the fathomless blue of the sky.

In the cramped capsule of Transit XIII Carter had sunk into the near torpor of hypnoid sleep, accentuated by the lethargic drag of constant acceleration. The sensation was an old one to him and not unpleasant. After a time he turned his viewer away from the vanishing grey earth and toward the stars where they hung in icy splendor, embedded in jet rather than hung in space. Again they seemed to be shining through purple velvet, pinpricks of light in a stage drop.

His mind was vacant, relaxed. He became conscious now, as always at this stage, of another presence with him. It was indefinable but real, sharing his consciousness, a brooding, maternal presence, disturbing and reassuring at once.

The intimacy of this experience and all its strangeness had originally irritated, even embarrassed him. It did imply a dependence which he resented in some degree even as he accepted it. It was not the confrontation of id to id or ego to ego, even personality to personality. It was, rather, superego facing superego, one highly censorious and critical entity in communication with another, with no blatant intermingling of the private aspects of the mind. The intimacy was mutually respectful and mutually self-respecting.

Here now in the unechoing vaults of space Carter could almost isolate Clara's location in his mind. She was poised somewhere above and behind his eyes, viewing the stars through his eyes and tincturing his judgments faintly with her own. As he attended to the duties of his journey, listening and responding to the crackling and fading voice communication with the earth, he smiled to think that the hypnoid travelers had managed to retain their sanity in

space thanks to a little old lady who was apprehensive even of stepping aboard a plane.

After two days outward on his journey the two-way voice communication with earth became impractical and crackled away into unintelligibility. The spacecraft, however, kept in delayed coded contact with the base on an automatic circuit. Only Clara was with him now. They were alone in the universe of dark. Transit XIII hurtled with redoubling speed through the island galaxy we call our own. Two hundred and fifty miles a second. Carter stared at the unmoving stars. A thousand miles a second it was when he looked at the dial again. The stars were unimpressed—motionless. Their brilliance hypnotized him till he was forced to shut them out. He dozed. Woke. Slept soundly and was awakened at intervals in a simulacrum of the earthly day.

On earth the vigil of attendance had taken on a tense-jawed routine. The shifts at the missile base came and went with a silent, preoccupied air. The newsmen sat at their unending game of poker. At the Narco Center Justin Prosser was persuaded to shower and shave and change his clothes before he hurried back, hollow-eyed, to his post. In three days he ate fifty candy bars and lost eight pounds. In her room Clara's daughter knelt in prayer. Near-by in the mountains Margaret Carter tried to maintain the illusion of normality with bustling breakfasts, the ride to school with the boys, the busy-ness of manufactured chores. Occasionally she found herself staring blankly at something her hands had picked up.

In its bustling way, too, the world was waiting. Newspaper circulation, as always during a transit, soared. The television bulletins were not enough. Everyone had to read the latest reports, and read them again, to make sure there was nothing that escaped them. As though by a miracle of hopeful expectation no news of food riots marred the pages for days on end. And everywhere men looked at the stars and dreamed.

Carter started up with a flash of panic surprise. Less than two hours to transit! An automatic injection slowed his heartbeat, quieting the fluttering that beat in his throat. He looked out once more at the stars, still hung in their immemorial pattern though he rushed at them at near the speed of light. And still the mighty vessel was accelerating, groaning now with the effort like a living creature. He was weighted against the cushions by the constant force. The speed was ringing in his ears and boiling in his blood as matter strove to cope, impossibly, with the speed. Carter grimaced with a pain that had no location, no confines, no limitations. He felt no contact

with Clara, did not have the strength to consider it. His head was crushed back, hands and arms turned icy, drained of blood, of life, sightless eyes staring. He opened his mouth in a voiceless cry of agony and despair, the tendons of his throat straining to tear through. He was rended unmercifully, his mind a red blur, his chest constricted in a suffocating gasp, choking hopelessly for breath.

And then, with the ease of a diver bursting upward through the water in a dazzle of burning crystal—he was through!

He was through. He was through and gulping at air as though it were life itself. The old knowledge was on him again. He laughed aloud with relief, raised a trembling hand to his sweating face. His whole body shook, shuddering loose the tensions of its ordeal. He lay panting, knowing that he must bring himself under control, for the moment not caring.

Why was it he could never clearly remember the vivid truth of this experience? The pain, yes, he could see that that was erased by the kindly mechanism of forgetfulness, but all this——this was worth the pain! Here there was no hypnoid oblivion. Rather, a superhuman awareness, a hypersensitive consciousness. He was alive!

Alive! Alive and aware now of the resplendence of the stars about him, transformed in that blinding second from distant ice to living fire. These were not stars, they were living, flaming suns.

Suns! And even as he thought of it, a touch of ice was at his heart! The laughter of success died within him. He flicked the viewer directly ahead. Retinas clamped painfully against the flaming truth, he clenched his eyelids closed, threw his hand to his face to shut it out. And still the truth burned whitely in his brain! Unseeing, he groped with one hand to flick a heavy shielding across his viewer. He opened his eyes. Was he blind? he wondered in panic. No, shapes returned to him, he could make out the forms of the console, peering cautiously. Shielding his eyes with his hand he looked once more at the viewer. Yes, it was just tolerable now, that white-hot glow dimmed to death blue.

The laughter of success bubbled again in his throat, this time as an ironic groan that threatened hysteria. He steadied himself with an effort of will. If this giant before him were actually the burnt-out nova that the flight engineers had set their sights on they had succeeded beyond their wildest dreams! Carter swallowed another bubble of hysteria. It was grotesque to think this monstrous blazing sun which filled a quarter of the sky could be the white dwarf of exploded Persei.

Carter felt the calm of his years of training sweep over him in a restorative wave. The transit, after all, had not brought him sudden death in fiery oblivion, though it might indeed have spared him for something infinitely worse. He remembered with a shrug of indifference that he had refused, as always, to carry a suicide kit. He remembered an instructor many years before: "But then a jagged piece of glass will always do. Under the ribs and up is best." He thrust that memory from him too. He would go down fighting if he went. This was too soon for despair!

There was something at least that he could do. He could work from certain knowledge as a start. Struggling sideways in his chair he could reach the computer-viewer dials which were ordinarily kept sealed throughout the transit. With a touch he exploded off the panelling that covered the dials. The metallic plate went careening downward wildly into the mechanism of the ship. Carter cursed his carelessness. Yes, the viewers were already turning and clicking, the fragile metallic arms outside moving unthinkingly, feeding what information they could gather into the guts of the computer.

What information they could gather! Could they gather anything with this hulking giant to blind them? Yet the filaments beneath the dials, whirling with nearly invisible speed, were recording something, if only a testament of despair. Carter strained to reach the spectrographic analysis reservoir, punch at its coded fund of information. The tape clicked out with obedient perfection and cold facts. The hulking monster ahead of them was unmistakably of the Persei type; the perfection of the machine forbade it to speculate further.

But Carter's breath was quickened by an absurd rush of elation. It was unthinkable that they could by accident have ventured upon so similar a phenomenon. A perfect success! An almost pinpoint placement.

A perfect success. Almost! Carter's lip curled at the irony. Buzz Barlow might be circulating now in the icyness of eternity with a similar success. He at least would go down in flame!

The rocket's viewers had picked up some additional information which it offered him with the same indifference. Transit XIII had traveled sufficiently far to establish a fix on the distance. Persei was now a mere two million miles away. At the inexorable rate he was now traveling he would be vaporized in the outer reaches of the sun in less than forty minutes. At the speed he was traveling he could scarcely begin to turn the craft in that distance. Anything more and it would shatter to a million fragments.

The machine did not scream as it made the announcement. It had not been instructed to panic or to pray or to struggle against the inevitable.

Carter stared blankly at the tape, which continued to tap out incidental information about the circumstances of his death. He did not have to read it. The machine, a sturdier creature than he, would continue to record and sort and compute for some time after he had torn his nails and his throat to bloody shreds fighting for air. Even after he had sunk limp into the merciful relaxation of death, staring eyeballs seared, his juices boiling from his slack lips—still the tentacled eyes of Transit XIII would turn and turn—till they too were blistered and cracked and their intricate joints hardened into infirmity. Then perhaps the machine itself might scream as it flung itself into the flames.

In the Narco Center an eternity away, as the moment of transit approached, Justin Prosser rose, haggard, from his chair, and walked, almost as though he was drugged himself, toward the instrumentation panel and the quivering needle that was Clara's heartbeat. It throbbed slowly, weakly, irregularly—but it moved. The medics, too, had turned their eyes to it. A chair overturned noisily and lay unnoticed.

"How much longer to transit?" Prosser asked hoarsely. "Less than two minutes," a voice answered. "If we can keep her going even a matter of seconds beyond that she'll pull him through."

"How much worse is she?"

"We may get her through the transit but she won't go much further."

"Adrenilin?"

"Any more would kill her faster."

"Electric shock? We can't worry about her now."

"She's been on shock for an hour. We're burning her up. In minutes there won't be a heart left to beat."

There was a pulsating silence. In the dark adjoining vault a tiny figure stirred unseen in murky depths. Stirred again. It was struggling now, struggling with the violence of the last encounter.

The voice that sounded in Carter's mind was a calm one, and it brought him calm. In his dismay he had forgotten Clara but she had not forgotten him. The astonishment that sought to destroy him ebbed. The reality of imminent death was less terrifying than the dark figure of his dream. He lifted his hands, steady now, and stared at the moisture on his palms. It was not the heat of that fatal sun, not yet, but the reaction of some secret inner creature that wanted very much to live—far more than it wanted to die.

Go back, go back, go home, something was saying to him, and a thrill that was almost elation welled up in him. There was that one possibility! It had never been done before, but he could go down trying! He could terminate the transit before its scheduled end! The absurdity of the concept made him smile. There was no adjustment he could make in the program of the rocket. He could not will that red hand, which had crossed the hour, on ahead. But it was, after all, the force of his will that pitched the mighty vessel through the stars at the scheduled end of the transit. Perhaps he could will it before its time. With Clara's help he could do it!

He leaned back, letting the consciousness of Clara flood the forefront of his mind. Her presence rushed in as a wind. She knew all, understood all, at once. There was no need for explaining. Yet even as they touched a greater sadness than before fell across him like a shroud of stardust. "Clara, what is it?" he murmured, half aloud.

The answer came back to him, not in words, but unmistakably: "I am dying. I am dying too."

The voice that sounded in his mind was a calm one, calm even in the sight of eternity. Words came through for him to hear now, came through clearly in her last great effort: "I hoped that I could save you but I do not have the strength."

"You can save yourself, Clara." His lips moved silently. "It will be better if you're not with me at the end. Break contact and you'll pull through."

Her voice was hurried but still calm. "No, it is too late for me. I knew it would be. I could not have foreseen what you have encountered there. God forgive me for my foolish pride!" There was an agonized pause as though she were summoning strength to go on.

"Why, Clara? Why? Did you know . . . know that you. . . ."

"That I was dying? Yes. I hoped there would be a chance to tell you what I most deeply believe. I hoped you would have time to act upon it. We were both bitterly deceived and the tragedy is my fault. Now the world may never know. I told Justin and I told Margaret but I hoped it would be you who brought back the truth."

"What is the truth, Clara? Do you mean that Schachter was wrong? I don't believe it! We could never have gotten back without your help. I know!"

Her words were coming now with obvious effort. "Before, yes. You needed me because you were not sure enough. Mine was a hand you needed to touch in all that strangeness. But there was only one tie that brought you back. It was the tie to those you love, to all that you love—me among them—that brought you back. Even as it

was the same ties of love that sent you out there. That was all, all."

Carter was serene. "Thank you, Clara. I pray that you are right. And if you must leave you go with my love."

There was a silence like the touch of a hand. Vivid pictures swam into Carter's mind. A life he had never known—scenes, faces, events in a fluttering kaleidoscope. Clara and the placid pattern of her life. The big frame house, her friends, her love. And then her girlhood and its wonders. Green trees and sunlight and a singing voice.

There was another silence.

He was alone. He sat up very straight.

Prosser thrust the medics aside. With the flat of his palm he smote the dial. Something like a sob broke in his throat. "Did she last till transit? Did she last? Isn't there anything that will . . . will. . . ." He sank into his chair, eyes covered with his hands.

"We tried everything."

Prosser jumped, banging over his phones. "Get base control on video. What's the time lapse till we can hear directly from the ship? Twenty-five minutes? Dammit, doesn't anyone know?" He was moving erratically, toward the viewing screen, toward the door, back again. "If Margaret calls no one is to talk to her except me."

"She's on the wire now."

"Let me." He grabbed the receiver, raised it, lowered it, took a deep breath and raised it once more. "Yes, this is Justin. It's perfectly all right, of course, so far as we know. Yes, we have passed the transit point. Of course, but there'll be a little delay before we know definitely. We're getting in touch with the base now. Radio, that's right." He put his hand over the receiver and took another deep breath. "Yes, Margaret. Yes, that's what happened, she was right. The moment we know."

Margaret Carter smoothed back her hair in an unconscious gesture and lowered the phone. She went into the living room where the boys were watching television, little Margaret sleeping peacefully on the couch. "Did you talk to Mr. Prosser, Mom?" Roger asked.

"Yes. Let's turn the television off for a while. Mr. Prosser will call us as soon as he knows."

Philip demurred. "Gee, Mom, this is the exciting part."

Roger, struck by something in his mother's manner, stood and stretched. "Come on, Flip," he said. "Let's go outside for a while."

"It's *raining.*"

"Come on, I'll play catch with you."

"Jackets," Margaret said as they ran for the door. She threw a coverlet over the girl's sleeping form, a sweater over her own shoulders, and went out to sit in the porch

swing. The mountains were dim in the mist.

They found Justin Prosser alone in the green dimness of Clara's death chamber when they came screaming in with the news. He moved out into the light amid flailing arms and hands that slapped wildly at his back. He reached for the phone almost unnoticed in the din. The voice on the television was inaudible above the shouts, but the Commandant was holding up the first newspaper headlines: "THIRD COORDINATE! THIRD COORDINATE!"

"He brought it back," he was saying softly into the phone. "All by himself he brought it back."

COMING SOON

It may be that Poul Anderson's fiction is too good to experiment with, but we don't think that the nature of our experiment will be found objectionable. That popular scientific swashbuckler has written—especially for F&SF—three short novels which, while independent, add up to a unity. Each story is complete in itself, requiring no further development; you can enjoy any without having read or to wait to read any other. Novel the first is entitled MARQUE AND REPRISAL, and will be followed in immediate succession by ARSENAL PORT and ADMIRALTY. The time is the future, the locations are Earth, Space and Distant Worlds; the characters are both human and alien, the action is fast-moving and the ideas are novel. You can miss any of these stories, but we guarantee you won't want to.

LETTERS

I don't like the trend toward sadism and the preoccupation with horror. In characterizing yourself as the "Cruelly Editor" you have perhaps been more perceptive than you intended. I wish you would restudy the works published during the tenure of Anthony Boucher.—W.F. POYNTER, San Francisco, Calif.

Congratulations on your July issue. Gahan Wilson is an excellent replacement for Feghoot—I only hope his imagination doesn't flag. You seem to have substituted an amusing, tongue-in-cheek presentation of sex for the morbid and sadistic stories in some recent issues. The change speaks well for your editorial taste and your respect for the intelligence of your readers. Your aiding the debut of new SF writers does you credit. Just bear in mind that people read your magazine for diversion and entertainment, not messages . . . Oh yes, as a professional physicist, I nevertheless enjoy Dr. Asimov immensely.—R. ANIGSTEIN, New York City

No, you did not dream up the Wizard of Mauritius, (editorial, June, 1964) even though he is worthy of you. His name was Bottineau (other names lost to history), & you may find a detailed account of all that is known about him in one of the most wonderful of all books (to men of our odd tastes), Lt.-Comm. Rupert T. Gould's ODDITIES: A BOOK OF UNEXPLAINED FACTS, London: Philip Allan (1928). What awes me a little is that your account-from-memory is exactly correct in every particular.—ANTHONY BOUCHER, Berkeley, Calif.

In 1834, a set of papers—letters, certificates, etc.—by and about the Wizard were published in the then new journal, *The Nautical Magazine.* Gould feels it unlikely that these papers constituted a hoax, partly because of the known personality of the editor, and mainly because of the prior currency of stories about the Wizard.—M.M. TAYLOR, Toronto, Ont.

From 1778 till 1782 the Wizard was credited with announcing the arrival of 575 vessels, many of them four days before they became visible [. . .] A BOOK OF MARVELS, by Lt.-Comm. R.T. Gould, R.N., Ret., published by Methuen & Co., Ltd., London, in 1937, contains seven essays selected from two of his earlier books, ODDITIES and ENIGMAS.—CHANDLER L. MASON ("Doc Channem"), South River, N.J.

Our thanks to Arthur C. Clarke and others who wrote in response to our editorial. No one has yet indicated whether there is any known scientific basis to the art of "nauscopy." A.D.

As an ancient historian and amateur archaeologist, I find myself in some of the queerer places of the world. But to my delight and unceasing amazement, I find F&SF

there before me. My most recent example is a 1960 copy found at the Oasis of Sebha, which is deep in the heart of the Libyan Sahara. —DIANA M. BLABON, Palm Beach, Fla.

One of our subscribers is a camel. A.D.

Ever since the invention of opera, the addicts of this form of entertainment, including me, have been waiting for somebody to do a decent opera about Faust. The Gounod is saccharine and utterly unworthy of the subject, and the Berlioz is uneven and virtually impossible to stage. Now you, sir, [in the introduction to Roger Zelazny's THE SALVATION OF FAUST, F&SF, July 1964] have made a discovery beyond price—that such an opera has been written by the one man in musical history who could have been counted upon to do a transcendent job of it—Wagner. Since the rest of us know only of the existence of the . . . *Faust Overture,* it is evident that you must be in possession of the manuscript score itself. Unless, of course, the man you have in mind is Mr. Murray Wagner, jwlr, of 64 West 48th Street?—JAMES BLISH, New York City.

Er, no, the man I have in mind is Juanantonio Philemón Wagner Lopez, 1820-1880. It is a source of great sorrow to his admirers that this gifted man's works seem so little known outside his native Guatemala. A.D.

C. S. Lewis's THE END OF THE WINE is truly the best poem I ever hope to read. It dug up the compost pile of my brain, and now I am simply reeking with thought.—VIKI EDSON, Livermore, Cal.

I've been living in France for the past 18 years. For kicks I compared your US edition with the French one. English is not really a new language to me, but I write and speak it only secondarily. Still, or maybe the word is, because of this, I am sensitive to what might be called a "change of pace" . . . A story, even a translation, written in American tends to carry a lot of tension, as in THE ILLUMINATED MAN (May 1964). In American it takes a lot of good, smooth writing to establish a calm mood, whereas by comparison a French writer must work hard to put pathos *into* his story. —JOHN EGAN, Houston, Tex.

An interesting thought . . . however, TIM, despite its American setting, was written in British by its British author, J. G. Ballard. A.D.

Euthenics, the virgin science, can stimulate environmental changes which could assure peace. Therefore, Euthenics is the inspiring word of today and tomorrow.—JACK GURLEY, Memphis, Tenn.

So inspire me. A.D.

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