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Joseph W. Ferman, publisief
Isaac Asimov, science editor

Avram Davidson, executive editor Edward L. Ferman, managing editor Ted White, assistant editor

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Has anyone beside ourselves ever heard of the Wizard of Mauritius? Did we dream him up? We will tell the story as we recall it, and see if it rings any chords or strikes any bells. The wizard, then, lived on the Indian Ocean island of Mauritius in the 18th century, when it was a possession of France. It was his practice to go to the top of a tall hill and there, having scanned the empty seas, predict the arrival of ships long long before they ever appeared over the horizon, by a sort of occult radar of which he alone possessed the secret. The wizard (whose name we cannot recall) ascribed his art to purely natural origins. The constant decomposure of organic matter in the oceans, he said, created gas which constantly rose to the surface, whence it was dissipated into the atmosphere . . . ships passing over the ocean surface disturbed this process and, in so doing, created another-which he called a meteor, in the older sense of the word, meaning atmospheric phenomena caused by luminous gases - and one which he had trained himself to observe. He continued to make these observations over the course of thirty years, and in only one instance did the ships announced fail to make their appearance: He had heralded the arrival of a large fleet; it was learned, later, that a British fleet of just such size had indeed approached Mauritius . . . and then veered off. His observation, of long duration and attested record, finally caused the Governor of Mauritius to persuade him to go to France and place his talent at the service of the French government. The seer arrived in Paris just in time for the French Revolution-and was never heard from again. Thus, the story as we remember it. It was our belief that we had read it in a book at the home of Damon Knight, but Mr. Knight denies ever having heard such a story or owned or seen such a book. Pues! Did we dream up the whole thing? Has anyone else ever come across it? Has anyone any notion if there exists even a basis for it in science, in fact, however implausible or faint? We would like to think so, and we think (whether we like to or no) that wizards ought to stay the Hell home on their tropic island and keep their Secrets to themselves.
-Avram Davidson

With a flourish of trumpets (an electronic tucket sounding from the side) and a feeling of elation and pride, we announce the first appearance in these distinguished pages of a rather new Science Fiction writer, F. A. Jacor. Mr. Javor was born in New Jersey in 1916 of a long-lived race-his father lived to be 107-and attended Columbia, Fordham, and NYU without taking any degree. During W.W.II he was a U.S. Naval photographer; he subsequently occupicd himself with crafts so diverse as prestigitating at children's parties and writing science fact articles for popular magazines. Mr. Javor, who is fond of playing the organ and the violin, describes himself as "a compulsive reader of everything, including labels . . . I read the EB through before I was fourteen." We hope to be favored with many more stories by the author of this one about Colin Hall and Ed West of the Animals to Order firm, Mrs. Harrison Bullitt (who Knew What She Wanted-and got itand got it), and Commodore Joshua Wall . . . a good man who knew his way around Procurement.

## THE TRIUMPH OF PEGASUS

## by F. A. Javor

It was working out beautifully, just beautifully, and if Colin Hall had been a less dedicated young man he would have been rubbing his capable hands together and perhaps even pounding his equally young but not-sosedate partner, Ed West, on his ample back.

Their entry in the jumper division of the horse show, Ato's

Pride, so named from the initial letters of their fledgling company's name, Animals To Order, a gleaming black stallion with four perfectly matched white stockings and a diamond-shaped blaze on his forehead, was just being led to the edge of the ob-stacle-planted ring and the roar of the crowd's approval was hackle-raising.

Instinctively Colin's eyes flew to the six-inch screen he'd jerryrigged to monitor a select few bits of the information being sent by the dozens of micro-transmitters implanted under the skin, adjoining the organs, the nerves, even sampling the bloodstream of the animal waiting to go through its paces below them.

Information being transmitted and recorded on the slowly turning tapes to be fed later into the University's computer if they, he and Ed, wanted a more complete analysis and, more to the point, if they could scrape together the necessary service fee.

But the complex and shifting pattern of light on the jerryrigged screen, small though its sampling was, was enough to let Colin know how their animal was taking to what was by far the largest massing of people he'd ever been exposed to. An emotional crowd that this, perhaps the greatest of the year's shows, never failed to attract.

A little too much salivating pain response a little high. I told that rider he had a tender mouth. But all in all, Ato's Pride was taking this crowd's adulation as much in stride as he had that of the smaller shows around the country they'd had to enter him in to garner enough first ribbons to allow him to qualify for this particular show.

This show that he and Ed had
finally decided to aim at in a mixture of hope and desperation. Then the grinding press of work and doing without, in which the gingerly placing into its embryotank of the cell that was to grow into the magnificent animal below them was almost an anti-climax.

An anti-climax to the arduous task of mapping its gene pattern and to the planning and the tailoring of the solutions that were to be so delicately, so precisely metered to it, but only a beginning of their gamble to save Animals To Order, their twoman partnership that gave promise but only of dying in the womb.

He had plucked the salmoncolored bank notice from the pile of due-chits that had just fallen from the vac-tube beside their office door.
"A lethal gene," he said wryly to Ed, sitting at what they'd hoped would be the desk of the receptionist they'd never been able to afford, straightening and rebending a paper clip. "A lethal gene. A fatal deficiency in the customer-forming enzyme."
"I've been thinking about that," Ed said, his face deadly serious for once. "Animals To Order is basically a sound idea, but I think our trouble lies in the fact that nobody knows we're alive." He clenched his fist. "If we could only advertise."

The wryness in Colin's smile deepened. "It isn't ethical."

Ed flung down his paper clip. "It isn't ethical," he parroted. "So we sit around and wait for recognition to come to us, and meanwhile we starve."

His voice went up a notch. "Ten seconds. Ten lousy seconds in the middle of somebody else's vid-cast. Ten lousy seconds."
"Relax," Colin said. "We couldn't scrape together the cash now even if we could advertise. Our equipment. . . ."

Ed waved a hand. "You don't have to tell me how much the rental on our equipment is costing us. I signed the papers with you, remember?"

He stopped short and rubbed the back of his neck with his palm. "I'm sorry, Colin," he said. "I don't mean to snarl at you but it riles me. We've got a potentially great service here and the rules of our game make it something dirty for professional people like us to go out and holler in the crossroads for people to come buy it."

Ed held up a finger and went on talking. "One order. One solitary order all the while we've been in business. It'd gripe anybody."

It was true. Although they'd been open for half a year, their business had produced little more than inquiries like the tentative one from a physician who was hoping they'd run across an enzyme, an acid, anything that might make the cells of an arm stump
de-differentiate and then re-differentiate and grow to restore the amputated limb.

Sorrowfully, Colin had to tell him that, although they could grow an animal with short legs or long legs or even transplant a developing leg, their science could not yet do what he asked of it.

Then there was the usual scattering of requests from biology and genetics students for the results of their most recent work sent quickly, please, by return vac-tube because there was only this weekend coming up in which to get the papers completed and turned in.

And the one solid order Ed had mentioned. From a downcountry milk manufacturer. Four heifers. All identical and matching perfectly their trade mark. To be sent around to the various state and bureau food exhibits to promote the name of their company and product. It was not a particularly difficult assignment. A great deal of research and gene mapping had already been done by associations and others interested in food animals so that it was chiefly a case of bringing together what he and Ed needed, and filling in the gaps to produce the animal they wanted.

Matching an animal to one in the picture of a trade mark was not difficult because you had only to look at it to know how well you'd
succeeded. It was the intangible qualities that made for a challenge.

As for identical animals, nature had been producing them for centuries. It was simply a case of splitting the egg once, and then splitting each of the daughter halves again.

It was the heifer order that gave Colin his idea, and staring at the pile of due-chits on his desk made the tussle with his conscience a brief one. "Ed," he said, "we have to do something to call attention to ourselves."
"That's not hard. Let's go out and blow up the Sub-Capital building."
"I'm not joking. You remember the heifer people?"
"Of course. Our one solitary contact with that great world of commerce out there beyond the laboratory walls. We were going to sweep it off its collective feet with our brilliance. I remember."
"They paid us for four animals whose only purpose was to promote their company name and advance the sale of their product. Right?"
"Yes, but that money is long gone and the rent is due in ," Ed counted on his fingers, ". . . four days. What are you getting at?"
"Simply this," and now Colin spoke slowly, the excitement in him growing. "What we did for them, we can do for ourselves."
"Build four heifers
?" Ed was patently puzzled.
"Of course not. I mean use our skills to build for ourselves an animal to do for us what the heifers are doing for the milk people. Call us to the attention of the public in general, and of our potential customers in particular."

Ed was pulling his lower lip. "An animal for the express purpose of getting publicity. . . ." And then his head came up. "Hey, TV coverage, wire services, the sport commentators the Sport of

Colin finished it for him. "Exactly, the Sport of Kings. A horse."

And now Ed's eyes were shining. "Great! We'll build the greatest, the fastest race horse to come down the pike since
"No," Colin shook his head. "Not a racing horse."
"Not a race horse?" Ed looked puzzled again.
"No. The people we want to notice us don't have racing connections. Besides," and he smiled wryly again, "we can't ethically afford to be that obvious. This has got to look like a labor of love. We'll build a horse to enter in the next infernational showing at the New Arena."
"Wait a minute," Ed said. "Doesn't the Dean's brother raise horses?"

Colin shook his head. "Not Harrison Bullitt . . . his wife. But do you know who is honorary
president of the horse show association?"

It was Ed's turn to shake his head. "No."
"Commodore Joshua E. Wall."
"Commodore Joshua E. . . . Not Commodore Wall of NavAir?"

Colin nodded, the smile on his face broad now. "That's right, Commodore Joshua E. Wall, Chief of Procurement for NavAir . . . and the man we've been trying to get in touch with since we first started."
"Don't keep the club so exclusive. He's only one of a long roster of people who haven't responded to our maidenlike overtures."
"True, but if we can get him to give us a contract, then we don't need to worry about many of the others."

Ed pushed back his chair and stood up. "What are we waiting for then, let's get started. When is the next show scheduled for?" he added.
"Early November, but entries usually close in October."
"October! That's cutting it close for a full grown animal."
"Closer than you think. We've got to get him out and picking up a fistfull of first ribbons before that, else he won't be able to even qualify for the big show. But tell me, Ed, can we wait until next year?"
"My head can, but my stomach
knows better. I repeat, what are we waiting for? There's only four days rental left on the analyzer."

The electron analyzer. The rental on the unit dug deep into their credit fund, but it was indispensable in their work. Offspring of the early instrument packets shot off to Earth's neighboring planets to analyze and report back by radio on their life forms, it had also done away with much of the time and tedious labor cost needed to map a gene pattern when all the researchers had to work with before its advent were bits of absorbent paper and a photographic plate exposed to a diffracted X-ray.

He and Ed might have used the University unit, but then its rigid rules would have compelled them to be researchers working for the University, and not the co-establishers of Animals To Order, their independent and commercial enterprise.

And now the months of work, of lost sleep, of going back to the making of tutor-tapes for the University to earn the money to live on, to keep open the skeleton of their office, to pay for the hauling of Ato's Pride from show to show around the country and the professional riders required, for fees; all of it looked now to have been worth it. From the sound of the Arena crowd's reaction to their first glimpse of the black stallion, it was plain that his snowballing
reputation had reached here before him, and that their gamble was at long last about to pay off.

He felt Ed's elbow in his side, Ed's voice, over the sound of the crowd, excited in his ear. "The Commodore! Over there, on the other side of the ring. I think that's the Commodore coming toward us."

There were many figures in bright blue formal clothes below them across the arena, but Colin had no trouble making out the Commodore's white hair and beefy shoulders. And it did look as though he was working his way through the assembled officials and others in their direction. Well beyond the Commodore, Colin noticed another man, also white lraired but built small, like a jockey, who looked to be following the Commodore toward them.

He called him to Ed's attention. "The little man, just coming around the left side of the judge's table. Do you know him?"
"No . . . ," Ed said after a moment, "but he seems to be trying to give the Commodore a race. I hope it's a tie."
"You hope it's a tie?"
"Right. If you've got something to sell, there's nothing wrong with having two bargainers on the grounds at the same time to sort of encourage each other to make you more and more extravagant offers. After all, who is the girl in town that everybody wants to
date? Why the one who has the most boyfriends already, that's who."

The Commodore went out of Colin's line of sight, going underneath their overhang, and in a moment, the little man as well. If they really were coming to themthen they'd be at the head of the ramp behind them in seconds. Colin forced himself to keep his eyes away from the spot.

And then the Commodore was bearing down on them. "Mr. Colin Hall?"

Colin turned his head toward the big, white haired man. "I'm Colin Hall," he said and did not go on to introduce Ed, stopped by a strangeness in the Commodore's manner. Somehow, the big man looked oddly embarrassed.
"Mr. Hall," the Commodore said, "there's been a question raised
"Hall? West?"
The voice, not loud, but penetrating, cut in on the Commodore. It was the small, white haired man.
"Just a minute," Colin snapped, irked by the man's abrupt manner and anxious to hear what the Commodore had been about to say to him.
"You Hall or West?" the man said, still flatly.

Colin turned in his seat to look full at the little man. "I'm Hall," he said and wondered why, with all the noise of the
crowd around them, he should suddenly get the feeling of being in the midst of an apprebensive silence.
"Mrs. Bullitt wants to sec you. Now."

Annoyance flared inside Colin and he didn't try to hide it. "Friend," he said to the little man who might have once been a jockey, "I don't know who you are, but . . ." Colin stopped, suddenly rehearing what the man had said. "Did you say Mrs. Bullitt wanted to see me?"

The man nodded. "Now."
Colin was torn. The Commodore was important to him and Ed, and added to this was the fact that some question had been raised important enough for him to seek them out at what must be, for him, a busy moment. But Ed and he frankly needed their jobs at the University and the wife of the Dean's brother was known to be an impatient and irascible woman.

The Commodore settled Colin's quandry for him. He spoke to Colin, but his eyes were on the little man. "Mrs. Bullitt has raised a question about the validity of your entry's breeding qualifications. There will have to be a hearing of course, but for now tell me this. Was your jumper a ." he groped for the expression, ". . . a test tube animal all through his gestation period?" "No," Colin said, puzzled. "He's
a replant. Why?" There was certainly nothing new about the technique of removing a potential egg from the dam of a desired animal, starting its growth in an embryo tank and then replanting it in a mother animal to complete its development. He and Ed had used the technique with Ato's Pride for the one compelling reason of its cconomy. It would have cost a great deal for the battery of technicians and equipment needed if they'd used a fullspan series of tanks to bring their stallion to borning size. But to feed and control one pregnant mare . . . ?
"In other words," the Commodore said, "your entry was natural born."
"Yes," Colin nodded.
The Commodore spoke to the little man directly, his voice sounding to Colin unnecessarily defiant.
"Ato's Pride stays. And you can tell that to your employer."

The little man shrugged. "I'll pass the word, Commodore," he said, "but you'll forgive me if I remind you that it's the association's rules committee and not the president who must pass on a thing like this."

Colin thought he saw the Commodore's eyes on the little man's waver. "Wait a minute," he said, half wildly. Someone, and from the sound of things it was Harrison Bullitt's intransigent wife,
was trying to keep his and Ed's one hope out of competition. 'You can't pull our entry now. His event is about to start."

The Commodore turned away from the little man. "He's right, you know," he said to Colin. "I don't have the authority for this, but I can call together the rules committee and I will."
"But the event, it's starting."
"Not yet it isn't, and I'll have it held off for as long as the crowd will allow. Meanwhile," he indicated the small man with his head, "we'd better go along with him."
"Let's go," the little man said, not seeming to be the least bit abashed by the Commodore's obvious dislike of him.

And half seething, half numb, Colin let him lead them to the Owner's Suite four levels below the arena floor, and eight levels below the street.

The room he ushered them into was large and brightly lit. Neoplast walls niched and hung with award ribbons, platters, trophy cups. Antique photos of horses and behind the stylishly narrow afra-wood desk, a fleshy-faced man in the customary bright-blue formal jacket. Behind him a huge vistaphoto of open fields, fences, white clustered buildings, pasturing animals. ABBY BULLITT HORSE FARMS cut very large into the gateside panels. The size of the establishment startled Co-
lin fleetingly. He had no idea that Mrs. Bullitt's interest, and investment, in horses was so great.

And standing beside the desk, thumping its top with a hardsounding finger, a short woman, thick-bodied and dumpy looking even in the smart green-and-white striped riding coat and sleek boots of a Major Hunt.

Harrison Bullitt Colin knew from having seen him in the Dean's office at the University; the woman turning pale eves and a querulous mouth toward them as they entered, he assumed to be Mrs. Bullitt.
"Why didn't you knock," she began without preamble. "Martin, you know I don't like people walkin on me without knocking."

The little man beside Colin made no answer, but Harrison Bullitt put a hand on his wife's pudgy arm. "We're not at home, dear. This is an office. It's all right for Martin to walk in here without knocking."

Mrs. Bullitt shook off her husband's hand. "I don't like people to walk in on me without knocking. Martin?" And there was venom in her look, all out of proportion to the incident that had sparked it.
"Yes ma'm," the little man said and his voice sounded sincere.

There was a long silence while Mrs. Bullitt continued to stare at her hireling, long enough for Co lin to become conscious of his
own heavy breathing. In a reflex of discomfort he cleared his throat and the woman's eyes snapped to his face.
"You," and again she spoke without preamble, "and you." And her eyes shifted to the space behind Colin where he knew Ed stood, and back to his with a darting motion of her head that somehow made him think of a lizard he'd once seen catching flies.
"You are the two young men who call yourselves Animals To Order?"

It was a question, but to Colin it somehow sounded like an accusation. "Yes, ma'm," he said.
"Speak up, speak up," she said. "I can't hear you. I like people to speak up when they talk to me."
"Yes, Mrs. Bullitt, we are," Colin said, louder, more than a little annoyed with himself at the way her sharp tone had put him off balance. Angry also that she could bring disaster to his and Ed's long-held hopes if her objection to their entry in the arena above should stand.
"Good," the small woman in the striped riding jacket said.

The word of approval startled Colin. "Good? I . . I don't understand."
"What is there to understand?" and her voice was impatient sounding. "You say you can make animals to order. Very well, I want you to make one for me. A
horse . . . a special horse . . . and after you make it I want you to smash the mold or whatever it is you use. I want it to be unique . . . mine alone and no one else ever to have another like it."

The light that had come into Mrs. Bullitt's eyes as she spoke made Colin think shiveringly of medieval princelings who would have a craftsman's hands cut off after he'd produced a work of art for them so that he could not surpass it for another, of architects blinded and put to death so that they could not build for another prince, in another place, a palace, a castle greater, or even the match of, the one possessed by their executioner.

Ed's voice in his ear, low, urgent. "Hey, a contract for an exclusive animal with Bullitt Farms. It may not be NavAir, but from the look of that vistaphoto behind the old man, it's no small-stake operation either. Don't haggle, man. After all, it's quick money and we've already done a lot of the groundwork with Ato."

Harrison Bullitt leaned forward. Even sitting he was a big man, and, although he bore no apparent physical resemblance to his wife, there was a certain flatness about the expression in his eyes that made the thought skim the surface of Colin's mind that here, Harrison Bullitt and his wife Abby, were two of a very unpleasant kind.
"Animals To Order," Bullitt said. "What is it that you do?"

Colin had answered that question dozens of times. He did not need to grope for an analogy to tell of his and Ed's work with the living germ-plasm of animals; of the fascination and the monotony of charting gene positions; of converting desired qualities into intricately interacting enzyme patterns; of eliminating genetic loads, the stores of harmful genes carried by all sexually reproducing species.

Of their bio-solutions and the organism growing in its succession of tanks, of the enjoyable tension of watching it until it could emerge and survive without their direction in the open world and be, if they were as lucky as they were entitled to be for their chosen profession was still as much an art as it was a science, be exactly as they had envisioned it at the start.

But Colin's analogy was simple. "Think of a chromosome as a microscopically tiny string of beads present in every plant and animal cell. Now each bead is a gene that determines or helps to determine some characteristic of its own animal or plant, like the color of its eyes, the structure of its bones, the smoothness or roughness of its coat, everything about it.
"What we do is sort of rework the beads, repair any damaged
ones, shape the string to grow into what we want it to be."

Harrison Bullitt shrugged his meaty shoulders. "Sounds cut and dried to me."
"I suppose it is, in theory. But we're dealing with a living organism. It can be killed and quite easily . . . or just die. A temperature can get a shade too warm or a shade too cold . . . or a stray cosmic ray can strike it . . . and it turns out in a way we didn't predict. Just being alive, I guess, is enough for it to not always do what you expect it to."
"Sounds like pretty much of a slipshod operation to me," Harrison Bullitt said, and from his voice Colin didn't know if he was being talked to or if the big man was just thinking aloud and not particularly interested or caring if he was heard.

But Bullitt went on. "Can you switch parts around?"

Colin thought of fruit flies with misplaced wings, of experimental animals with third eyes, of twoheaded dogs. The early researchers had produced all of these and more, and with modern pressor and laser beam techniques it would be even simpler to do. But it was one of those understandings that can exist between two men without ever having been mentioned or even thought of, that he and Ed would not debase their profession by peddling sideshow freaks.
"We can," Colin said aloud, "but we won't."

Mrs. Bullitt laughed shortly. "That's one of the stupidest expressions in the language. Young man, never say you won't do some particular thing. You'd be surprised at the things you'd do if the bind gets tight enough."

Colin had no answer for her except to hold his rising temper in check. What answer did anyone ever have for boors, particularly influential ones like these two.

Mrs. Bullitt dropped her heavy figure into the plastiform visitor's chair beside her husband's desk, letting her booted heels fly out in front of her as she did so.

Colin noticed roweled spurs and was surprised. He didn't think anyone wore the spiked discs anymore, particularly to ride valuable animals.

There were other chairs in the room, two long sofas along opposite walls, but Mrs. Bullitt did not wave them to a seat. Colin, Ed, and Martin off to one side of them now, remained standing. The Commodore settling deep in the chair he'd dropped into when they came in.
"I want a horse," the sitting woman said matter-of-factly, "with wings."
"A horse," Colin started to say and then did a mental doubletake. "A what?"
"A great idea, isn't it. A horse
that can fly. Nobody, but nobody in the association, in the world, will be able to top that."

Colin could only stare at the woman. She couldn't be serious, but from the set of her face it was plain that she was. "It's impossible," he managed to say. "It's a physical impossibility."

Annoyance flared in Mrs. Bullitt's pale eyes. She struck the arm of her chair sharply with the flat of her hand. "Don't use that word," she said. "I don't like it. Do you hear? I don't like it."
"But it is impossible," Colin said and he didn't know if he was pleading for her to understand or to hold on to his own sanity. He had never before in his life met people like this.

Beside him, Colin heard Ed whistle through his teeth, softly to himself. "A Pegasus she wants. A flying, neighing, flaming Greek legend she wants."
"A flying horse is a physical impossibility," Colin said.

Harrison Bullitt seemed amused "Everything is impossible . . . until the price gets right. All right," and he sat up in his chair, "let's stop this nonsense. How much is it going to cost me?"

Colin felt like a man trying to keep his footing on a mound of slippery sand. "You don't understand. It's not a question of money. It's not money at all."

Bullitt seemed to be getting annoyed. "I don't see that you
should have any particular problem. You said that you could switch parts around. What's so tough about grafting a pair of wings onto a horse?"

The feeling of floundering on shifting sand deepened in Colin. "A wing isn't just something added onto the outside of an animal, and it's not an oversized shoulder blade. It's an integral part of the skeleton, it has a full system of muscles to support it, to move it. Look."

He held up his arm, his fingers extended, his hand bent downward at the wrist. "It's like an arm. The finger bones are long," he made the stretching gesture with his other hand, slapped his arm. "These bones are there, holding, supporting the tissues of the wing itself
"I never noticed much of a skeleton in a fly wing," Harrison Bullitt interrupted, not bothering to hide the growing of his annoyance.

The sand was beginning to have a sucking feel to it. "Yes, but a fly, any insect, has but the tiniest fraction of the weight of even a small bird. A bird," Colin said, grasping at a fact that would convince these two that he was not merely throwing up phony obstacles to milk them of their money. "The largest bird. A condor. Ten feet across the wings. Weighs how much? Forty pounds.
"Now a horse. Even a lightly
built saddle horse will weigh a thousand pounds and you know better than I how large his muscles have to be just to move him around on the ground. Even if we did ." he stopped himself. He was beginning to think like these people about the fantastic.
"Even if we could," he corrected himself and went on. "Even if we could re-form his front legs into some semblance of wings, the muscle structures needed to lift half a ton into the air would be so huge that the poor beast probably couldn't even stand under their weight. Then to support all that weight we'd have to make the bones thicker and sturdier and that would add to the weight and . . . don't you see?" he ended helplessly.
"Weight," Bullitt said. "Don't prattle about weight. Only last night on TriV we saw a . . . some kind of a flying dinosaur. Weight." he snorted.
"A reptile," Colin said, and it was quicksand he felt the suction of. "A pterodactyl. But even the largest of those had only a twenty foot wing span."

Colin hadn't been watching Mrs. Bullitt particularly, but now she seemed to explode out of her chair. "You see," she flung at her husband. "I told you there was no point in trying to be nice to these people. They know only one kind of language. All right, if that's the way they want it."

Her eyes, flat and expressionless in spite of the anger in her voice, bored into Colin's. "Young man," she said, "I want a flying horse. Are . . . you . . . going . to . . give . . . it . . . to . . .me? She spaced the words deliberately.
"I . . . I . . ." Colin floundered and then was amazed to hear Ed's voice.

Calmly, rationally, Ed was saying, "Now let me understand this clearly, Mrs. Bullitt. You want us to recreate for you the legendary flying horse Pegasus. Is that correct?"

Colin stared at Ed. Recreate legendary . . . what had gotten into Ed?

And then he heard Mrs. Bullitt's voice. "Legendary. You mean someone has already had a flying horse?"

Colin's eyes snapped back to Mrs. Bullitt's face. Petulance seemed to be always in the set of her mouth, but was there something else there now? Did he see disappointment?

Hope flared up in Colin at the method he thought he saw in Ed's apparent madness. If Mrs. Bullitt became convinced that someone else had beaten her to the possession of a flying horse, even centuries removed in time, then maybe enough of the bloom would be rubbed off the idea for her to abandon it.

But he must have, couldn't have, but he must have misread

Ed's intent because his partner's next words were, "Not exactly, perhaps, but I do believe that many legends, even the more fantastic, may well have a basis in fact."

Mrs. Bullitt took Ed's words for ammunition. "You see," she snapped at Colin. "Your partner admits that it can be done."

But Colin was staring at Ed. Unbelieving.
"What are you talking about?" he half shouted at Ed. "What legends and what facts?"

And Ed was looking him right in the eye and saying, "Almost any legend . . . or folk saying. Like 'dumb blonde' for example. You know that every once in a great while someone comes up missing one of the pigment forming enzymes. Naturally, they can't help but be blonde. But they are also mentally retarded, and seriously. Somebody noticed the two conditions, jumped to a vastly broader conclusion than the observation warranted, and there you are. But there was some basis in fact."

Colin could only stare at Ed. The enzyme was phenylalaninase and the mental condition phenylpyruvic oligophrenia. But Ed couldn't be serious about a Pegasus.

Or could he? Ed was going on. "And you remember the zoo on the continent that was backbreeding legendary animals?"
"Backbreeding legendary animals? They took modern cattle and backbred them until they had a cow that looked like an extinct ancestor. Where," he demanded, "where are you going to get me the germ-plasm of a demigod to repeat the feat for a flying horse?"

Taking firm hold of his voice because he didn't know whether to laugh or hit somebody or just bang his head on the panelled and trophy-hung walls, Colin said to the room in general, "Thank you very much for your confidence in our ability. It is very flattering, but very much misplaced. We cannot build a flying horse. Thank you again and goodbye."

And he put a hand under Ed's elbow and almost shoved him out of the room, and into the passageway, the angry voice of Mrs. Bullitt following them out.
"You'll be back, I promise you. You'll be back and remember, I won't be as easy to get along with next time."

Controlling himself, Colin slid the door shut gently.

He turned to Ed. "What got into you? You know as well as I do that we can't give her what she wants. Nobody can."
"Of course I know it," Ed said. "But that woman isn't rational. I was hoping to at least gain us a little time to figure out something, anything. The way it is now, Lord knows what she'll do."
"I . . . I'm sorry, Ed," Colin started to say, but he was interrupted by the opening of the door they'd just come through. The Commodore emerged and slid it shut again. He stood rubbing the back of his white hair with the flat of one hand. "A flying horse," he said and shook his head. " A flying horse."

He looked at Colin. "I suppose it's impossible."

Colin didn't feel like going through that one again. He nodded.
"Are you sure?" the Commodore persisted. "I don't want to quote an old saw, but the one about doing the difficult right now and the impossible taking a little longer has a good deal to it, I think. We are doing things today as a matter of course that we used to know were impossible."

He smiled. "It used to be an obvious fact that what went up had to come down." He paused and looked from Colin to Ed and back to Colin again. "Have you checked any of our satellites lately?"

It struck Colin that the Commodore was beginning to sound like Harrison Bullitt. "I think I get your point, sir," he said, not because he did, but because the quicksand feeling was back and he wanted to get away from it and Abbv Bullitt's office.
"No you don't," the Commodore said, suddenly blunt. "I
thought of buying Ato's Pride, looked him over very carefully. Then I realized that if you can do for food animals what you did for him, then you've got something I can use. I could give you an initial contract and I could defend it, I'm sure. But with Abby throwing her weight around there's more to it than being willing to justify your actions to an investigating committee. She's thorough and she's fast. You'd probably get hung up because one of your hogs dribbled on the sidewalk."

He shook Colin's hand and then Ed's. "You think about it," he said. "And you look me up when you get Abby Bullitt off your back. Hear?"

And after the older man had left them to go back up the ramp, it was Ed who broke the gloomy silence that he'd left behind him. "You know," he said, "he might just be right."
"About getting Mrs. Bullitt off our backs? I'm convinced."
"No, about what we know is impossible. We know that a horse can't fly and we know why not. Maybe if we turn the whole thing upside down and start by assuming that a horse can flv. Now what can we come up with?"

But Colin's mind was numb. A horse can fly. Now the Bullitt virus was getting to Ed. A horse can fly. "Forget it," he said aloud. "Let's go secure Ato and then check out."

Their stallion was already in his stall when they got to the ani-mal-quarters level just below the arena proper.

Slatted concrete floors, cushioned, with lagoons below to catch the droppings. Lagoons constantly running with their odorcontrolling washes. Show feeds, specially formulated to inhibit the action of gas-forming bacteria. Everything doing its job of holding down, of eliminating, the characteristic offal odor. Doing it well too, but when all was said and done, a stable still smelled like a stable.

More than once Colin had wondered why the whole problem couldn't be eliminated at the source, so to speak, by just not feeding the animals at shows in the usual way. Penetra-dermal units were standard items, available at any lab supply house. The concentrates were not expensive, and they need be used only during indoor shows and perhaps a short time before.

A unit to feed an animal the size and weight of a horse need use an area no larger than a man's palm. There was no pain reaction that he'd been able to detect, in fact, some of their lab animals even seemed to enjoy the warmed-air caress of a penetradermal feeding unit.

But, Colin supposed, a practice taken more or less for granted in one field, was too startling a break
with the traditions of another to be even talked about, much less adopted. Besides, from what he'd seen of horse fanciers in recent months, he was beginning to think they rather liked the smell of horses. He knew that for himself, he was beginning to find it not altogether unpleasant.

They rubbed their animal thoroughly behind his ears, accepted the condolences of the attendants for their hard luck at his not being able to compete, showed their pass-out badges at the Manager's window.

He was a balding man behind the grilled opening. He ran a finger down the tally-board at his elbow, ticking off their badge numbers.
"Mr. Hall? Mr. West?" he said. And when Colin nodded, went on.
"Message for you to call this number." He passed a small folded slip through the bars of his grille.
"Thank you," Colin said and unfolded the paper. "It's the Dean," he said to Ed. "I wonder what he wants?"
"I can guess," Ed said, "and I don't think I'm going to like it."

Colin dialed the University and flipped the phone switch to multispeak so that Ed could hear.

The Dean sounded embarrassed and he talked a great deal of the fine work Colin and Ed were doing. He made a passing
mention of a board of trustees. He assured Colin and Ed of the warm personal regard in which he held both of them. But when he was through talking and the phone was back on its cradle his message was clear.

The University no longer needed their unique talents in the making of its tutor-tapes. Not now, nor in the forseeable future.
"She moves fast," F.d said. "Fast."
"She said we'd be back. I guess we could have more or less expected her to do something, but I never thought that this was the kind of pressure she had in mind. It . . . it doesn't seem civilized somehow."
"Breaking a man's rice bowl seldom is," Ed said. "But cheer up, we still have an office with our name on the door."

He laughed, and it was not a pleasant sound. "That is if the cleaning people haven't told the landlord we've been sleeping in it for the past three months."

The horse show ran from Tuesday of one week through Tuesday of the next and, surprisingly to Colin, Mrs. Bullitt did not appear to be put out when the rules committee found in their favor on the question of Ato's breeding raised by her.
"You know," Ed said, "I don't think she really wanted to win this one. After all, if she'd managed to get our entry disqualified
this time around, then she couldn't very well have expected any animal we might build for her to be eligible, if she had in mind to enter it in the future."
"I think she might expect a special class, if not for her flying horse, then for her."

But Ed could be right. She meant only to keep their entry out, to give them a charge, to encourage them, she might say, to see things her way.

He and Ed had won in the committee room, but it turned out to be an academic victory. When they got down to the stable level they found the shield-shaped sheriff's notice taped to an upright of Ato's stall. Some confusion among their creditors, the bank being chiefest. Until it could be straightened out, their assets, Ato's Pride included, were being impounded.

Sudden, impotent, frustrated fury poured through Colin. It wasn't quicksand. It was a solid brick wall and he was backed against it. He clenched and unclenched his fists . . . and felt completely helpless.

Ato's Pride made a little dancing movement with his hoofs. He tossed his head, his nostrils flaring.
"I'm upsetting our horse," Colin said. "Let's get out of here."
"Yeah," Ed said. "Yeah." And Colin noticed that his face was white and he too was shaking.

It was after they'd checked out and were striding up the ramp to the street that the thought hit $\mathbf{C o}$ lin.

He caught hold of Ed's arm and pulled him to a halt. "Ed," he said, "how do you know a horse is a horse?"

Ed pulled his arm away roughly. "I'm in no mood for jokes right now," he said, "so do me a favor and skip it."
"I'm not kidding. How do you know a horse is a horse?"
"All right, Mr. Interlocutor. How do I know a horse is a horse? Because it looks like a horse. That's how." Ed stopped. "You can't mean.
"That's exactly what I mean," Colin said. "Turn our problem inside out. Don't try to build a horse and make it fly, instead, take a creature that can fly already and make it look like a horse."

Ed was laughing. Colin thought he heard a hysterical note in the sound.
"A . . . a . . . thousand pound bird."
"It wouldn't weigh a thousand pounds. Birds are built differently from horses. Hollow bones. Are you listening?"
But Ed was still laughing. "A . . . a horse with feathers."
"What is a feather if not a modified hair . . . and vice versa."

Ed was wiping his eyes. "Hol-
low bones. Did you ever heft the bones on a thirty pound turkey? You build an animal as big as a horse, it's going to weigh like a horse. You've still got half a ton to lift into the air, and it doesn't much matter whether it's a horse muscle or a bird muscle that tries to do it. It still is an impossible job."

Ed was right. To end up with what they wanted, they would have to start with something just as special. "I'm sorry," Colin said, "I. . . I'm just not thinking straight."

They made their way on up the ramp and walked the not-sogreat distance to their office building. Colin laughed shortly when they came in sight of it. "It's a cold night. I hope Mrs. Bullitt hasn't managed to have us locked out."

Colin thought he was making a bitter joke, but when they reached the door of their office, a small green placard hung on its knob. The terms of their lease clearly prohibited the use of the premises as living quarters. Would they kindly be ready to vacate in the required three days.
"She is a witch," Ed said, his eyes staring.

But all Colin could do was pound his clenched hand against the wall of the passageway until the pain of it brought him to some semblance of calm.
"We're going back," he finally
said. "We're going back and we'll sign her contract. We'll give her something. I don't know what, but believe me, it will look like a horse . . . and I promise you it will fly."
At the Arena they found Mrs. Bullitt in the Manager's office rattling a fistfull of papers under the balding man's nose while the handful of clerks in the room made it plain that they were too deep in their work to see . . . or hear . . . what was going on. Fleetingly, Colin wondered if she wore those roweled spurs to bed.

She did not seem surprised to see them, nor did she seem inclined to take Colin and Ed to her own office. She half-turned away from the manager, the papers still clutched in a fist, to face them. "You're back," she snapped. "I told you you would be."

The waspish tone of her voice might have made Colin turn around and walk away from her only the day before. Now, in some perverse way, it made him stand his ground.

He was surprised at how quiet his voice sounded. "Yes, Mrs. Bullitt. I think we're ready to accept your assignment."

The woman in the striped coat and boots made an abrupt motion to one of the clerks and the girl came to her immediately. "There's a blue envelope on my desk. Get it," Mrs. Bullitt snapped. The girl scurried out the door.
"I knew you'd be back," she said to Colin and Ed. "You see, it's all a question of understanding people. It always is. People never know what they can really do until they absolutely have to do it or else."

She smiled and her face looked smug. "All I ever do is provide the 'or else'."

Colin held his tongue, but beside him he could hear Ed breathing heavily.

The girl clerk came back and Abby Bullitt took the long blue envelope from her hand and dropped it on the Manager's counter in front of Colin.
"Sign it," she said, leaving it to him to take out and unfold the long shape of the contract for himself.

Colin ignored the slight, but at his first glimpse of the printed form he looked up at Mrs. Bullitt, puzzled. "This . . . this contract is with the University. I don't understand. Yesterday your husband
"Yesterday's contract was with me. Today's is with the University."

She smiled and now she seemed to be thoroughly enjoying herself. "I told you then that I wouldn't be as easy to get along with again."

And suddenly Colin was aghast as the full implication of what she meant to do struck him. She meant to have her flying animal,
and she meant to compel them to give it to her for nothing. Absolutely nothing . . . or else.

Under a University grant they could, of course, use its facilities, its equipment, but at no profit to themselves, not even a mention of their names if the University was not disposed to lift them from anonymity.

He ran his eyes down the page. It was the standard University form, printed, with the usual blank spaces for additional items left to be filled in.

But the items filled in were anything but usual.
"Sixty days," Colin gasped, his eyes, unbelieving and dazed, moving from the smiling woman, to Ed, and back again. "Sixty days?"
"A little added incentive to keep you from dawdling," she said. "I know how you people like to stretch things out when you think you have hold of someone you can take advantage of. Surely in sixty days you ought to have something to show me. Now sign."

Ed took the contract from Co lin's nerveless fingers, it rustled loudly in his shaking hand as he glanced down it. "Sixty days and we guarantee results." He flung the contract on the counter. "The way that's phrased, we could go to jail for outright fraud if we don't deliver."

Abby Bullitt had her arms crossed in front of her, tight. She said nothing.

Silence hung in the room.
Abruptly Ed snatched the Manager's chained-down pen from its stand and scribbled his name across the bottom of the stiff paper. He shoved contract and pen at Colin. "Here, sign this and let's get out of here."

Through a haze that was red and gathering, Colin signed and flung down the pen. "Would you like your horse to be of any particular color," he said bitterly, and was aghast to see that Mrs. Bullitt seemed to be taking the question seriously.
"Arnold," she said to the balding manager, "what is the name of that liqueur we had at the Hunt dinner last Wednesday?"
"Chartreuse, Mrs. Bullitt. Chartreuse."
"That's it," she said, and then to Colin. "Make it chartreuse."

And suddenly beside Colin, Ed was laughing and he didn't seem able to stop. "A chartreuse horse. A flying, flaming, chartreuse horse."

And in the open air of the street Ed was still gasping. "Oh, a chartreuse horse."
"Why not? A chartreuse horse is just as logical as a flying one."

Ed went off in another fit of laughter. "Logic. Oh, my aching logic. He's talking about logic."

But logic was what they used at first. Logic and Colin's wild idea to start with a living animal
that already flew. "It's a cosmetic problem now. Not engincering. It doesn't have to be a horse, it just has to look like a horse."

Weight against size. Colin thought of fish that could distend themselves with air. There was large size with small weight. He thought of a litter of fox terrier pups he'd once handled. All were solid, chunky, heavy in the hand. All but one. The same size, but lighter than the others, so much so that his hand had come up unexpectedly when he'd picked it up. It died, but it had been lighter.

They slept in the University dorm, ate in the cafeteria, and they worked. Together at first, then, as time pressed them and there was still not a glimmer of success, they worked scparately to spread their investigations.

They worked with the cells of birds. Searching for size without weight. Speeding the development of their dividing cells as much as they dared, projecting the rest of the development by computer when they had even a tentative pattern to program, guessing at more than they should have.

Anything, anything at all, that was large and could lift itself from the ground. That to start and the hope of plastic surgery, transplants, for the rest.

Nothing. Not a thing.
Sixty days. Mrs. Bullitt. A
reckoning . . . and a reprieve. Not of their asking, but of her brother-in-law's, the Dean's, pleading for them, for more time.

A reprieve. A reprieve and a new contract. A contract the Dean walked out of the room and would not watch them sign.

Sixty days. No more. And this time a cash penalty. Added. If they fail, they must reimburse the University in full for the loss.

They seldom saw each other now, Colin and Ed. They slept when they could, worked when they could, ate if they could. Ed was trying irradiated cells now. Gathering them from wherever he could.
"Sure it's as subtle as a shotgun," he'd said, "but nothing alive today is of any help to us. We've got to come up with something new."
"That is a typical panic response," Colin said.
"What else have we got left but panic?" Ed wanted to know.

And then one bleary afternoon Colin came awake in the dorm to Ed's shaking him. "Wake up," Ed was saving, excited. "I think I've got a lizard that's trying to make like a bird."

Colin tried to shake the weariness out of his eyes. "A lizard?"
"Yes, I got to thinking about how birds and reptiles are distantly related, so I went over to the reptile house, picked up what cells I could, brought them back
and set them up to be bombarded. This one projected pretty light for its size so I let it develop. Just now it tried to attack me."

He held up a hand, the edge of it was bleeding. "It ran on its hind legs and took off right into the air at me, its front ones going like crazy. So help me, Colin, I think it was trying to fly."

It was a lizard all right, nondescript brown, the size of a small dog, sitting on its haunches. And Ed was right, it did look as though it was trying to fly when it leaped for their throats and struck its teeth at their padded arms instead.

They took what cells they might need from it and, because it was so patently vicious, they destroyed it.

Cells died. That was expected. Others went awry and were destroyed. But one. One cell developed well and its tapes projected well.

Sleek reptile head forming. Earless. No problem. Ears are easy to form and attach later. Front legs shaping up as true wings now, clawed toes long, well membraned. Transplant leg buds from another developing cell to chest of prime animal and hope musculature will develop enough to support them. Compatability of tissue no problem. After all, aren't they actually all from the same animal.

Coloring a bonus feature, though. They did not work for it, did not plan it, but their animal seemed to be developing a greenish, golden cast to its sleek skin. Ed laughed. "She might have her chartreuse horse after all."

And the tension. The unholy tension. Out of its tank for days now, still won't eat, but seems to be doing well on penetra-dermal regimen. And as light, beautifully light as the tapes had predicted.

University gym. Transmitting implants in position, tapes set up, monitoring screen ready. Long tether. Running, on hind legs like predecessor, wings spread. Glide, not true flight, a glide. Too weak yet, too undeveloped. More plastic work needed on that reptile head. Teeth also, still too carnivorous looking for a horse. Glad this one is docile, not like its pappy. Tushes. Remember tushes. After all, he is supposed to be a male horse, you know. Why won't it eat?

They were working together now, but exhilerated. Intuition mostly, no mapping. Pointless. To map, you needed the developed animal to see what its genes would become. And if they did manage to develop one to suit Abby Bullitt, what was the need for a map?

More trials. Flying now. Really Alying, no tether, comes when whistled for, obeys hand signals too. Open air, too large for gym
now, needs apen air. Try it tomorrow. Call Mrs. Bullitt.

University Field. Clear, beautiful day. They'd produced a magnificent animal.

Golden green in color. Its natural position at rest seemed to be sitting on its haunches, front feet resting on the ground, the claws had fused into very acceptable looking hoofs. Its great wings not folded flat and down against the body, but carried high so that their tops, the leading bony edges curving gracefully behind its head and high arched neck, gave it a remotely haloed look.

The tail, although Colin could not see it from this angle, was not like a horse's, and not like a lizard's either, but flat and used like an airfoil. A handsome beast, and, holding it by the bridle it had learned to wear, Colin was at once proud yet fearful of it. Made uneasy by the look in its eyes of waiting, of a biding of time. Where is that Bullitt woman?

She came, and riding a horse. Ed swore and reached to help Colin hold their animal's bridle, but it did not shy. It had never seen any animal larger than a lab dog before, but it seemed no more than mildly interested and stayed sitting.

But not Abby Bullitt. She'd dismounted and stood in front of their animal now, hands clasped.
"He's beautiful. He's beautiful," she repeated over and over, looking up at his great head towering above her.

Colin looked away from the light in her eyes. She looked hypnotized.

And now Colin felt his animal move. The biding eyes were looking down at Abby Bullitt, and slowly, magnificently, the great wings spread. Spread in a movement Colin had never seen before. Spread upward and outward until they seemed to blot out the whole of the morning's sun.
"Oh," the woman gasped. "Oh, I must ride him."
"No," Colin said. Something was going on here that he didn't understand and his feeling of uneasiness was deep. "No, he's never been ridden before. Never even mounted."

But Abby Bullitt had her hand on the bridle. "Let go," she said. "I must ride him."
"No," Colin said and then his hand was bloody where she'd cut it with her riding crop and snatched away the bridle.

She flung herself onto the animal's shoulders, into the hollow between the high-carried wings, her sharp spurs gouging.

It screamed and it ran. On its hind legs as Colin had so often seen it do, its grafted front ones tucked in, birdlike, and then it was in flight. Again it screamed and now Abby Bullitt's voice was
blended in the sound. Was it delight . . . or terror? Colin could not tell.

The mount and its rider climbed higher. The screams were fainter now, but the terror in Abby Bullitt's was plain. Toward the river and the tall cliffs beyond it the animal flew. And then it and the screaming were gone. But, airborne, it had been seen and heard, and now the crowd was gathering.

On the rim of Coln's consciousness the voice of Ed was shouting.
'Now don't worry. We know exactly where they are. The transmitters, the police can home in on the data transmitters.

But Colin wasn't really hearing him. Colin was staring at his jerry-rigged monitoring screen. The pattern of light darting and swirling across its face was a strange one for this particular animal, but one not strange at all to Colin. He'd seen it before, many times, constantly almost, with Ato's Pride, and he recognized it now with a growing horror.

Somewhere, greedily, slaveringly, the Bullitt beast was at long last feeding.

Hunched, wrapped in blankets, holding steaming mugs, Colin and Ed, in the cockpit of the patrol boat that had pulled them out of the river. Ed still shaking his head.
"It went for us. Did you see how it went for us?"

Colin didn't answer him, knowing that Ed wasn't looking for him to. Remembering the two of them in the police coptor, with the pilot and the man with the heavy carbine. Tracking their animal, homing in on the emitting signals of its data transmitters until, on the rocky face of the cliffs, halfway up, they caught the glint of the sun on its goldgreen skin.
"There!" Ed shouted, pointing, and the coptor hovered close.

Crouched it was, on the jutting shelf. The great wings half unfurled, opening, closing, twitching.
"Do you think she's still alive?" the man with the carbine said, then, "Forget it."

It rose to meet them. Hurling itself at them with a ferocity that brought to Colin's mind the vivid image of its dog-sized predecessor.
"Move!" the man with the carbine was shouting at the coptor pilot. "Swing this thing around! Give me a clear shot!"

But the pilot had already swung his craft. Hanging on its screw, he'd turned it like a pendant bubble and the man was firing.

Again and again Colin saw him jerk with the recoil of his heavy weapon but the great flying animal was still airborne.

Upon them now it was. Cir-
cling around them, great wings flailing. Lips drawn back from its bloodied teeth.

Claws. It looks like it's got claws on those feet and not hooves.

And then it struck. Like the huge beast of prey that it was. It struck, swooping down upon them from above and behind with a speed impossible to evade; with a whistling and a shrieking that Colin was sure he heard even above the clatter of their own coptor blades.

And into those blades it plunged, and the impact was tremendous.

They hung there in the clear sky for a heart-stopping moment; the screaming animal and the maimed machine. Then they fell. Fell the few hundred feet to the river and into its chilling waters.

Beside Colin the coptor pilot shivering in his blankets called out to the man at the patrol boat's wheel. "See it yet?"
"No," someone called back to him, and the man who had lost his carbine pulled his blankets closer and said, "Forget it. He's not floating with all the lead I put into him."

They were waiting for them on the jutting dock when the patrol boat swept close. On the dock and coming out to meet them in their hovering craft. The vidcasters, the reporters, the curious.

And after them the TriV coverage of the inquest, the investigations, the public's blatant, and their colleagues' more discreet, inquiries into how they produced their miracle, until at last even Ed turned to Colin in their office one morning and said in genuine dismay, "I know I wanted publicity to put us over the top, but enough is enough."

Colin smiled and waved the pale blue vac-tube message his secretary had just handed him.
"The Commodore says thank you but he doesn't think he ought to accept Ato's Pride from us, not as a gift anyway."
"Why not?" Ed said. "It's the least we can do to show him our appreciation for the contracts he's wangled for us."

Colin laughed. "Those he says he doesn't need to defend, not any more. But he doesn't want to get fouled up with any committee investigating expensive presents to government people.'
"Tell him to take the horse and stop worrying," Ed said, and from his expression Colin could not tell if he was kidding or not. "If they fire him, a growing organization like ours can always use a good man who knows his way around Procurement."


## SPECIAL SUMMER ISSUE

Next month's July issue (on sale June 2) will feature CANTATA 140, a complete short novel by PHILIP K. DICK. It involves a most unusual presidential campaign, and you will not want to miss it. The supporting cast will include several especially fine short stories.

That small girl may, as an old woman, be still alive, who, walking with an elder through a torch-lit cave in Spain, espied something which had lain buried in the Urn for centuries; and whose astonished and pleased cry of Toro! Toro! first disclosed to modern eyes the incredible speluncular murals of the stone-tool men. The bison bulls of Altamira and all their painted kith are no longer suspected, as once they were, of being hoaxes. The what of them is accepted as a truth. The why may still be said, with measured caution, to have remained a mystery. Stephen Barr, who-like Theodore Sturgeon-lives in fortunate Woodstock, New York, is the author of THE HOMING INSTINCT OF JOE VARGO (FdSF, Dec. 1959) and CALLAHAN AND THE WHEELIES (Aug. 1960). He takes the currently commonest viewpoint on cave art, takes issue with it simply and plausibly, takes us to seebriefly and vividly, by the burning bracken and the smoking wick of the grease lamp-an hour quick and splendid and terrible in the days before men began to call on the Name of the Lord.

## THE MASTER OF ALTAMIRA

## by Stephen Barr

Inside it was still very cool, almost cold, and it was beginning to get smoky from the grease lamp. They could smell Spring coming in like a warm draft from the outside.
"Why do you keep doing that?" said an old man.
"He makes animals that way," said the strongest son. The one who was painting paid no attention. A small gust of air that
smelled of damp earth made the pale flame of the stone lamp flicker. He moved it over to his left side to shield it. One of the women got up and went to where she could watch better.
"He makes the animals and then we, the hunters, go out of the cave and the animals are there," said the strongest son. One of the other young men grunted.
"He does not go out to hunt."

The painter paid no attention. He put down the wet lump of ochre he was holding and picked up a piece of cinnabar and dipped it into some grease in the hollow of a hot stone.
"Why do you keep doing that?" said the old man.
"When the spring grasses are up," said the young man, "the animals will go away from this place. The ones that he is making and the ones outsidc. Then he will have to come with us."
"In my day . . ." said the old man.

A woman said, "Shush! Your teeth are gone, old one."
"You shut up," said the strongest son. "Weed-picker! Root-digger!" He reached out and slapped at her. She giggled and moved towards him. She was his half-sister and would soon be his mate.

The painter put the piece of cinnabar down on the edge of the hot stone and wiped his right hand on his thigh. Then he picked up the lamp and held it high over his head and stood back. The great shoulders of the bison had a rich red glow from the cinnabar. The neat front feet, the little hooves, were poised together. Over toward the back of the cave was a blank space on the wall. He walked to it and looked at it. Then he came back to his colors and hot grease.

A young man said, "It doesn't look like a bison: it has only three legs. Where is the other leg?"

The strongest son said, "It is a bison with three legs which we can catch easily." He turned his face around over his shoulders at the others. "See: he makes the game so we can catch them."
"Sometimes they stand so that they have three legs," said the painter. "This one has."
"It is a great magic," said an old woman.
"He makes the animals," said the strongest son. "This is not magic. The animals are there when we go out."
"I like to do this," said the painter.

A man sitting outside the mouth of the cave holding a granite hammer over his knees said without turning his head, "Two men are coming." The young men got up from the piles of dry bracken. The strongest son hissed at them and they all stayed absolutely still. Then he went to the man who was watching and listened with him. Inside the cave the women who had children took them to the back. The painter scooped up some molten grease with his hand into the lamp. It sputtered and flared up more brightly.
"Who are they?" said the strongest son very quietly to the watcher. "Can you smell them?" He looked back at the young men and made a throwing gesture with his arm. Without taking their eyes from the opening of the cave they all picked up their throwing-flints
and came towards him.
The watcher said, "It might be the two brothers: the ones you drove out. They have bear-meat it's too strong. I can't tell yet."
"What's happening?" said the old man.
"Shush," one of the women said and began to stroke his face. Towards the back of the cave the drip of lime-water was audible and the soft cooing sounds that the mothers made to quiet their children. None of these made any real noise.

The painter had put his lamp on a ledge and stood looking towards the opening, with his hands hanging down at his sides. Once he looked up sideways at his work.

Outside the young men stood with distended nostrils and their heads turning slightly from side to side, to catch the direction of the approachers. The watcher said, "Yes: now I can smell them-the brothers."

The men moved silently out into the darkness: it was impossible to see where they went. Eventually some of them were halfway up the nearby trees, others up on the face of the rock overhanging the cave. The painter had gone back to work. He was drawing a small aurochs in the blank space on the wall. "Bear meat!" he said. "Ha!"

The two men with the dressed bear made no secret of themselves,
and they walked with their full weight on their feet. As they got to the edge of the faint circle of light around the mouth of the cave they stopped. One of them let out his breath noisily as they eased the carcass onto the ground.
"An offering!" he shouted. There was a pause.
"IWhy" said the strongest son. Another pause. The newcomers whispered together for a moment.
"We have no stones. Can we come to the cave?"
"No! Leave the offering and come tomorrow with the sunlight."

Back in the cave the old man said, "What are they shouting about?"
"Shush, I said!" said the woman. She stopped stroking and hit him on the mouth. He smiled and nodded his head. The painter went on with the aurochs, frowning and squinting his eyes.
"It is a great magic," said the old woman. She couldn't see the paintings: she was quite blind.

Outside, the men with the bear started to hoist it to their shoulders again.
"Leave the meat!"
"We want to see the animals he has made."
"No! They are ours: you may not look at them."

There was the sound of the bear being lowered onto the grass.
"Tomorrow? With the sunlight?"
"You can come with the sunlight to the cave, but you may not look at the animals. They are our magic."

The painter came to the mouth of the cave with the lamp in one hand and a piece of charcoal in the other. "Shut up!" he shouted. "Children! Toothless old women!" The strongest son and the watcher turned towards him glaring and with their lips drawn back from their gums. The two men with the meat watched this carefully. Then they looked quietly over their shoulders and back again at the other three.

The watcher put his hand on the strongest son's arm, and his mouth close to his ear. "Others have come," he whispered. The two men left the bear and came forward into the light from the stone lamp-they had obsidian hatchets hanging from their wrists by gut loops. The painter saw all this.

He said, "The animals are mine," and went back into the cave.

Nobody moved. The newcomers stood confident and grinning with their shoulders hunched up. They were fingering the willow grips of their hatchets, their eyes first on the cave and then towards the dark woods. A faint sound came from the other side of the clearing.
"We must see these animals," said one of the newcomers. "We
can find nothing now across the hills. All the game is here in this cave. Nothing is left for us." The watcher began to turn his head toward the place the faint sound had come from. The strongest son stayed still, his eyes on the brothers, trying to get the new smell, but the bear was too strong. The first flint hit the watcher in the throat, cutting it open.

Some of the young men ran instantly to the mouth of the cave, but most of them waited to drop as nearly as they could onto the backs of the men that came running in from the darkness. The women were bringing out armfuls of burning bracken which they put in front of the cave in a heap. Their hair was singed, and they were shouting and stamping in a loose rhythm. Nobody paid much attention to the fire. The strongest son held a man in his arms and dashed him onto the ground, and turned his head and snapped at one of the brothers who was crawling towards him with a stabbing stone, and blood coming out of his mouth. There was a tremendous number of these new men.

Some of the new men, the marauders, were now in the cave. Most of the children had been killed by this time, and now they were looking at the women. Their way of standing when they did this was to sway on their legs from one side to the other and make their faces become lifeless. The
women most of them had their mouths open and clenched their eyes, holding their dead children. Near the mouth of the cave the young man who had complained about the painter was using both his hands to hold the wrist of an enormous and unbeatable man. He thought he could hold this terrible strength away.

One of the men who had got into the cave said, "Where are the animals?"

The old man pointed at the wall: he was too feeble to be frightened. The marauder looked at the wall, searching for hanging dried meat or crevices. He turned furiously on the old man. "The animals-the ones the magician has here! Where are they?" He killed the old man with his obsidian axe before he could answer.

He turned and looked at the wall again, his nostrils widening as he caught the smell of the grease. He went over and sniffed along the thick lines of the drawing. He sneezed because of the drying ochre, and stood away from the wall. He looked up at it again and tensed his muscles. The red of the cinnabar in the bison caught his eye, and he reached forward and tasted it with his finger. He stared at the tip of his finger and back at the wall. Then he went
back to the body of the old man and hacked at it again.

Some men came into the cave carrying the painter, who was biting and grabbing. "Here is the maker of animals!" they said. "Show us where the animals are!" They raised him and brought him down hard on the floor. Then they looked at the walls of the cave. Their eyes were flat, and when they came to the paintings the colored lines meant nothing to them. One of them said, "He must have an amulet."

Another one standing next to the painter's body turned it over with his foot. "No," he said. "He hasn't any. He hasn't any magic."

The first one said, "I knew it was a lie. Come."

It was an hour or so before daylight when they left, taking the women with them who were still alive. They went back through the spring woods, picking up the bear meat on the way. They went down across the swamps and waded a river that was there then. Finally they and their shouting were lost in the deep forest on the other side of the distant hills.

In the cave the flame in the stone lamp guttered out. In a little while a glimpse of the dawn sun made the bison's ruddy shoulder glisten with the congealing grease.

## BOOKS


analog 2, John W. Campbell, ed., Doubleday, $\$ 4.50$

This is actually the third of the series, PROLOG TO ANALOG having been the first, and is in my opinion a better book than ANALOG 1. Let's get into it. The notion that the future will see weather control has appeared in various SF stories, and the how of it carried along the whole of Theodore L. Thomas's The Weather Man. It is both intriguing and logical that the men who direct the weather should be more powerfal than governments; and the author goes right to the source, i.e. the Sun, in detailing how it's done; ". . . a thin stream of protons could be extracted from . . . a sunspot and directed against any chosen sunside part of Earth." Good. And how? By sending men in space ships enveloped in a "thin film [of carbon] [which] protected the entire Boat from the searing heat . . . the way a drop of water rides a layer of vaporized water on a red-hot plate . . ." I don't believe it for a minute, but it's a good story anyway. There's a nice
notion in Allen Kim Lang's tale that dirt-farmers like the Amish can serve to help an agriculturally primitive society on another planet up the road to technology, but the tale is so arch and cute that I felt over-full of schnitz-un-gnepp long before it was over. Other contributors are Mack Reynolds, James H. Schmitz, John T. Phillifent, Christopher Anvil, and R. C. Fitzpatrick-the latter with by far and away the best story here, a brilliantly-done handling of a bran-new theme: emotional reactions show up a la radar on a device's screen in police stations; experienced operators are thus enabled to prevent crime . . . sometimes. By no means as simple as my over-brief summary may indicate, the story is first-rate from any angle and worthy of appearing anywhere.
ghostly tales of henry james, Leon Edel, ed., Grosset, \$2.25

Professor Edel is the Henry James man, and, apparently assuming that we have all read these stories as often as he himself has, helpfully supplies each
one with an introduction in which he deftly manages to relieve us of any degree of suspense which we might otherwise have experienced in seeing for ourselves. Evidently we are expected to read for style and moral alone -and, truth to tell, style and moral is about all they haveand, truth to tell, I don't care a hoot for either. I approached this collection with a negative indifference to Henry James which I did my best to overcome, I worked hard at it, I didn't succeed. The whispy, gauzy, precious, mannerized pieces-period piecesof the famous expatriate arouse in me nothing stronger than a desire to say that the emperor has no clothes . . . But I will concede that perhaps he does have clothes and that only some unfortunate malocclusion of the optics prevents me from seeing them. For those who can see them, and who want to see them all, here they are: The Romance of Certain Old Clothes. De Grey, A Romance. The Ghostly Rental. Sir Edmund Orme. Owen Wingrave. The Friends Of The Friends. The Turn of the Screw. The Real Right Thing. The Third Person. The Jolly Corner. Joe Kaufman's cover is typical of this class of fancy paperbacks. I believe I know what might have done Mr. James and his fiction a world of good, but I cannot be franker in a family magazine.
the hills of dionysus, Clark Ashton Smith, privately printed.

Ah me, it seems so long ago that I climbed a crumbling old tenement in the lost land of Zothique to consult an astrologer there. And here is a memorial volume of selected poems by mine erst guide, a labor of love by Roy A. Squires and Clyde Beck. Most of the poems, to quote the former, "are not . . . fantastics." But some of them are, notably the lovely Amor Hersternalis-

Our blood is swayed by sunken moons
And lulled by midnights long foredone;
We waken to a foundered sun
In Atlantean afternoons;
Our blood is swayed by sunken moons
-so, the first verse. This is a collectors item, caviar to the general (and if that appears with a capital $g$, heads will roll), and I list the particulars as a public service. There are 33 poems, set and printed by hand, editions as follows: 65 copies on Warren's Antique, paper cover, $\$ 3.75$; 100 copies on same paper, casebound in half cloth, $\$ 6.50 ; 15$ copies on Hamilton Andorra, casebound in full cloth, with poem signed by CAS laid in, \$25; "postpaid anywhere, net to all." This review is overlate and I don't know how many copies are still available; inquiries to Roy A. Squires, 1745 Ken-
neth Road, Glendale 1, California. Clark Ashton Smith is often compared to H. P. Lovecraft, his contemporary. A striking difference between their poems is that Smith's, here, are so often devoted to love: a subject conspicuously absent from the recent volume of Lovecraft's poems reviewed earlier.
through the alimentary canal with gun and camera, George S. Chappell, Dover Books, \$1.00

Well, well, it would be nice to say a nice word about this nice old (well, it seems old: 1930) work, now reprinted, which contributed an enduring phrase to the American language, although the phrase itself was actually coined by Robert Benchley, who did the introduction. O. Soglow, of Little King fame, is the illustrator. The attractive little book is "a satire of . . . academic pomposity and . . . cliché-ridden travel literature," and some notion of its style and contents is indicated by chapter headings such as We Go To The Head, Down To Digitalis, We Fish For Phagocytes, In Cardiac Country, The Sources of the Bile, \&c. Mild and old-fashioned, it may still retain some of its original appeal to those who like their humor that way.
charlestown chosts, Margaret Rhett Martin, University of South Carolina Press, $\$ 3.50$

Books by university presses used to follow a rather certain pattern. A Syriac, Chrestomathy With Paradigms From The Biblical Chaldee might be one typical title; and, for another, Esau Tatum Sloate, West Dakota Pioneer ("The University Press acknowledges the generous assistance of the estate and family of the late E. T. Sloate in making possible the publication of this volume.") Add, perhaps, Euphemia Nethersole, Poetess of the Old Poosapipick; and Industrial Lard Rendering, 1880-1920, and there you have the general picture. Things have changed a lot with university presses; only, with the University of South Carolina Press, maybe not so much. Viz., CHARLESTON GHOSTS, by Margaret Rhett Martin, a southern gentlewoman whose "art training was put to practical use when she opened an interior decorating shop in Columbia [. . .] she is zealous in the arts of gardening and creative flower arranging." At least one of the short sketches is based on Mrs. Martin's personal experience at Old House on Edisto Island, where she saw the hant, "quite distinctly, [of] a small man in a nondescript gray suit and a gray hat. His eyes were cold and mean and full of hate."

Some of us might have fled the scene in loud terror. Not Mrs. M., who "dozed fitfully until the clock told me that I might venture downstairs. I put on a robe and, after fortifying myself with coffee, joined my hostess on the piazza." I am filled with admiration, and would not dream of doubting her for a minute. Many of the tales are memorable in other ways than the authoress intended. The experience of being tied all night to a tombstone in Childsbury graveyard, ghastly as it must have been to the child victim, isn't nearly as much so as her name-Catherine Chicken. As for Dr. Joseph Ladd, murthered in a duel by Ralph Isaacs, I can only say that the exempla of the doctor's noetrv Those charms which beautify the nobler part/Which shine, fair maid: which centre at your heart/ . . .") convince me that Isaacs was justified on literary grounds alone. My favorite, however, is the old lady of Old Goose Creek Plantation, who only haunts people who read novels on Sunday instead of attending divine service. These itty-bitty tales are amiably and inoffensively told.

SAVAGE PELLUCIDAR; TARZAN AND the tarzan twins, Edgar Rice Burroughs, Canavarel Press, \$3.50 each
the well-known Fourth Avenue booksellers, Biblo and Tannen), which first launched the Burroughs Revival by reprinting ERB books in the public domain, and the Estate of Edgar Rice Burroughs, which greeted this action with roars more of outrage than dismay, have since kissed and made up. Canaveral now pays royalties on all the volumes and is the authorized hard-cover publisher (Ballantine Books is the official soft-cover publishers). One result of this has been the release of MSS locked up since the old master's death in 1950. And one result of this has been SAVAGE PELLUCIDAR. To quote Turgenyev, "One doesn't know whether to be glad or sorry."

TARZAN AND THE TARZAN TWINS is billed as "the only Tarzan book which Burroughs wrote expressly for younger readers." Good enough - but it is hard to believe that SAVAGE PELLUCIDAR was written expressly for older ones. Of the two, the juvenile is much the better-written. In neither one is there much trace of the characteristic bum-blingly-ornate prose style of ERB's earlier writings, and while it is hardly missed in the kiddy book, its absence is felt in the other, for there is hardly anything else to make up for it. SAVAGE etcetera is illustrated, inside and out, by J. Allen St. John; and Roy Krenkel did cover and interiors
for THE TARZAN TWINS. In this instance the pupil seems to have outstripped the master.
the 8th annual of the year's best sf, Judith Merril, ed., Simon and Schuster, \$4.50

An interesting and arresting jacket design by Lawrence Ratzkin graces the indefatigable Miss Merril's octave volume: published in '64, compiled in '63 from stories published in '62. Haste is not one of the volume's faults . . . indeed, the volume has no glaring faults, and has, I think, benefited by the inclusion of more stories and the exclusion of the chunks of nonfiction of the sort found in earlier volumes of the scries. As before, Miss Merril searches out and draws upon sources not often used by other• SF anthologists-Harper's, The NY Times, SEP, Playboy,

Saint, Escapade, Rogue, and others. As before, there is a brief essay ("Summation: SF 1962") by the editor, and a briefer one ("Books") by Anthony Boucher. She is in error, however, in identifying Walter Kerr, author of The Decline of Pleasure, with Walter Kerr, author of many poems published in F\&SF. My favorite story is the delightful SEVEN-DAY TERROR by R.A. Lafferty-my favorite of those which I see here for the first time, that is; the very good Gerald Kersh and the really unusual R.C. FitzPatrick, for example, I mentioned in my reviews of the latest SEP and ANALOG anthologies. Among Name Authors, the 8th SF includes Harrison, Finney, Brunner, Leiber, Anderson, Aandahl, Bradbury, Ellison, Ballard, Brown, Clifton, Reynolds, Pohl, Russell (Bertrand, not Ray), Henderson, Dickson.
-Avram Davidson

PUBLICATION NOTED:
Asimov, Isaac. The Human Brain. Houghton. \$5.95. Non-fiction, illustrated. The Human Body. New Amer. Lib. 75¢. Non-fiction, illustrated. Bergaust, Erik. The Next 50 Years in Space. Macmillan. $\$ 5.95$. Astronautics. Clarke, Arthur C. Profiles of the Future. Bantam. 604.
Cleary, Jon. A Flight of Chariots. Morrow. $\$ 5.95$. Novel of astronauts.
Cummings, Ray. Beyond The Stars. Ace. 40c.
De Camp, L. Sprague. The Hand of Zei; The Search for Zei. Ace. 40q.
Del Ray, Lester. The Mysterious Sky. Chilton. \$3.95. Non-fiction.
Dick, Philip K. The Game-Players of Titan. Ace. 40q.
Galilei, Galileo. Dialogues Concerning Two New Sciences. McGraw. \$2.95. Gunn, James. Future Imperfect. Bantam. 40q. Short stories.
Lovecraft, H. P. The Dunwich Horror and Others. Lancer. 50¢.
Thomas, Shirley. Men of Space. Chilton. \$5.95. Biographies, illustrated.
Van Vogt, A. E. The Voyage of the Space Beagle. Macfadden. 60\&.
Vonnegut, Kurt. Cat's Cradle. Dell. \$1.65.

Mr. Walton here conjectures vision of a time when everything which now clutters up society-vice, crime, and impermissable urgings-have been cleaned off and tidied away . . . or have they? It is said that whenever the Supreme Soviet revises history, subscribers to the Soviet Encyclopedia are sent fresh-printed pages to replace the no-longer-applicable ones. Even if these are obediently razored-out and returned to be burned or pulped, even if the bright new ones are compliantly pasted in, still, still, there must always remain the awkward evidences of repair.

## THE PEACE WATCHERS

## by Bryce Walton

Chimes announced a, gentle eleven-thirty curfew, and Peace Watchman Jimmy stopped whistling.

His patroling footsteps assumed quiet reverence as all New Sunnydale Apartment project doors and windows closed, locked, automatically sealed off human sound in air-conditioned and noise-proofed rooms.

Watchman Jimmy faded to an ubiquitous shadow slipping around the walks among uniformed trees and manicured patches of unruffled lawn smooth as glass pools. But Jimmy felt a part of every family up there closed off cozy and safe together. His genial young face wore a serene smile pinned to it like a part of his uniform.

Everyone in this whole honey of a world was warm together in one big sweet sculpture. Jimmy smiled up at windows going dark. Hundreds of eyes closing with affectionate winks for Jimmy.
"Goodnight, Jimmy. We're all with you with love."
"I'm with you."
Jimmy hardly ever had to give out citations for social violations after curfew. He'd used to hand them out by the dozen. For littering, not curbing a dog, walking on the grass. Even a few instances of defacing public property, like with those kids carving their initials on fountain stones. There were still some after-curfew violations. And a few peace disturbances, like that woman last week
being scared dumb by an insect, whole family panicked by a bug in the kitchen. None of them including Jimmy had ever seen one of the ugly, poisonous little devils before, but he'd taken care of it neatly enough. A Peace Academy graduate, or so went tradition, could deal neatly with anything.

And sleepwalkers were still seen occasionally. They were usually brought back before they got lost in the unpatrolled darkness and poisons of unsterilized zones. Any local Mental Health Clinic promptly cured a returned sleepwalker. Sleepwalkers weren't serious, of course, and they were getting scarce. But Jimmy wished there were none at all. He was oddly disturbed by even the thought of a slecpwalker.

Jimmy walked his beat. His screne smile bobbed between walls of glass, chrome, brick, gleaming steel and new white concrete. The moonlight reflected spanking newness and a reassuring fragrance of fresh anti-septic construction. It sang around Jimmy, a big rebuilt engine in which no one heard a knock or a squeak these days, not a rattle or a ping.

Jimmy stopped, then slipped to the sidewalk's edge. No, it wasn't a new statue set up on the grass since last night. It moved. Yes, a girl. A slim girl in white pajamas. Not a sleepwalker he decided quickly. She saw him, motioned to him. A sleepwalker wouldn't.

Jimmy said with official gentleness. "Miss, it's late." But she didn't answer, Jimmy smiled. "Hey, it's after curfew, miss."

She watched him. She couldn't be a sleepwalker, like that poor guy. Hopkins. Her hands wiggled up at him like pale fish fins. "Peace-watch-"
"Yes, I'm the Peace Watchman."
"Up there-ba-ba-badddd "
"What?" Jimmy still smiled as she ran to him and both her hands held hard, but shivering, to his arm. Her white face twisted. "Blooo-bloo00-"

Cold touched Jimmy that was not of the summer night or breeze. He held the girl up with reassuring grip and smile. "We don't want any social demerits do we? Now where do you live?"
"Deee-deee-" Her mout'l worked on without a sound like a pink-rimmed gill. Her eyes stretched and strained toward a nearby post-light.
"Now, now." Jimmy's voice had assumed a doctor's confident reassurance and confident kindness. "Would you please give me your apartment number?"
"307-North—wing-" She bent away. Why, she was vomiting. He watched with puzzled compassion. Some simple stomach upset. Then why hadn't she or her family pressed the emergency button to call the local clinic's everready health corp?
"I'll take you home. What's your name?"
> "Lois-Palmer-"
> "It'll be all right, Lois."
> "What will?"
> "Everything. You'll see."

She finally let herself be persuaded into the building and up in the elevator. But she kept pulling back. Fever? Jimmy wondered. A reactivated germ or old virus? Unpredictable little emergencies, minor accidents occurred, though not often. Jimmy had to adminster first-aid until the clinic bovs showed. She might be stunned, shook up, surprised by something. This diagnosis didn't satisfy him either. He felt sweat gathering at the edges of his hair.

But as they approached the door to apartment 307, she stopped holding back. She walked firmly and looked straight ahead with a curiously blank expression, sort of like that sleepwalking Hopkins now. But no, Jimmy thought, puzzled. Not like that either.
"Here we are," he said, still with a kind of smile. But his hand didn't quite touch the doorknob. He listened.

He heard it again. A sound like an animal sniffing and panting. A dog of course, what else? It faded off, but Jimmy still hesitated. He glanced at Lois who stared blankly at the door, waiting. This might be the symptom of a very rare but
serious crime. Like using hostile language. Or maybe someone in her family had been smoking cigarettes. Some people still were turned into addicts when they stumbled onto coffin nails buried somewhere. That was about the worst, Jimmy thought, his ear to the door. What a shock it must be to see a loved one helplessly tempted into damaging the sacred tissue and cells of life. How awful! But Jimmy seemed to feel a quick, dim, but precise excitement, as of a pleasure far in the future or lost in the past. His smile felt strained. He jerked open the door.

Lois promptly marched in ahead of him. He went in, shut the door. Lois turned her whole body slowly as if no part of her could move separately from the rest. Jimmy followed her stare to the bedroom door, then his own gaze pried down to the rug.

The usual frantic, very selective mental clicking occurred in his head. His brain took in only the minimum data necessary for action. Blood. Holes in a broken skull. Eyes looking at nothing, as dead as burned-out fuses.

A corpse.
Jimmy's eyes closed. A welloiled series of conditioned responses and associative patterns went into action. After initial conditioning by Psyche-engineers at the Peace Academy, every Watchman was regularly rechecked, kept everready. Key
sounds and behavior and visual stimuli such as the sight of a corpse, triggered a Watchman to immediate crucial action.

Death. Is this cessation of life the result of natural cause? An accident? Or a symptom of the psycho, a victim of deliberate violence?

That had to be determined at once.

But between Jimmy who smiled and walked his beat, and the Jimmy suddenly made aware enough to take appropriate action, there was an inevitable spasm of suspended shock. For a moment he knew what color his dreams would be if he ever remembered one. Red. Thick syrupy red. Hot and lapping at the white beach of his brain. Reawakened memory and necessary awareness were always horrors. They reached up again to seize Jimmy like embalmed dreams. Memories, images of unleashed hostility continued to trickle on his brain like melted ice.

He leaned on the wall, head back, eyes closed, mouth open, breathing shallow, as his face paled. It was like a moment of threatening dissolution. To act, a Watchman had to admit the existence of the old disease-of that which, in any normal state, must never even be named. Hate did reoccur. Hostility still festered. The vindictive heart still pulsed its hunger to destroy. The virus of
anti-life had not been entirely filtered out. To cope with it, the Watchman had to admit even the existence of the unspeakable-the deliberate killer, the monster, the murderer that might be waiting and hiding anywhere.

A Watchman could be aware of all facts for a while, even know why. He could know that universal peace had become necessary for human survival. He could also know that the worst of conceivable diseases, then, was emotional. Even the mildest symptom of hostility could no longer be tolerated. The ultimately lethal virus was anti-life. It was also the most contagious. All were terribly vulnerable. No one seemed immune to fear and vindictiveness. No historic sickness could burst into such flaming epidemic and all-devouring plague. It had to be totally erased from all society or there would be no society. The vindictive virus had to go, preceded by the wiping out of its seedling fears.

So every new community everywhere had its Mental Health Clinic. The concentration was almost entirely on prevention. Hostility must be destroyed at its fear-roots. Out of sight, out of mind. It was never seen. It was never spoken of. It no longer existed for people in the light of day or conscious reason. And at night all the world sleeps.

All except the Watchers of the Peace.

And a Watchman could accept it only long enough to seal everything about it off. Clean it up as if it had never happened.

Jimmy opened his eyes and pushed off from the wall. Now he didn't smile. His face seemed older, lined. He blinked slowly while all points of light in the Palmer living room multiplied as though the focus behind his eyes had also suddenly changed. Only a hint of odd distortion remained in him, an inner disturbance that even now must not be more deeply defined or named. But he was calm, composed, positive of every necessary procedure. He had to be. It was a matter of immediate quarantine, of the prevention of universal plague.

He moved, with a minimum of thought or conscious feeling.

He knelt near the corpse, studied the oozing holes in the old man's skull. He lifted the ID tag, checked a photograph against the features on the rug. He went to the bedroom door and kicked it open.

Two pale faces bobbed in semidarkness. One cried out. The other snarled. Jimmy slammed the door.

He had recognized the face of the former sleepwalker, Hopkins. Hopkins yelled through the door. "Stay out. Let me be or you'll get more like Palmer. A lot more before I'm through."

Lois still stood looking blankly at the wall as into a fog.
"What do you want now?" Jimmy called through the door.
"Just let me go out of here and where I want, buddy."
"Where?"
"I don't give a damn where. Anywhere away from you bastards always watching and prying and measuring."
"Why?"
"None of your stinking peaceful business."
"You'll only do the terrible thing to yourself you did to Palmer."

Hopkins laughed. "That's not all, buddy. I go, Mrs. Palmer goes too. I got this old biddy in here still alive and kicking a little. Know what else, buddy? I got more of what Palmer got. Plenty more power where that came from."
"You can't even get out of the project," Jimmy said.
"Maybe you won't either, you phoney little peace bastard."

Jimmy's mouth twitched, almost imperceptibly.
"I do something that's my idea, just mine and the hell with you prying bastards, that's all," Hopkins yelled. "Stay off me. I found this mean old black Betsy out in the dark. It'll blow little old Mrs. Palmer's brains all over the damned community center. I found a box full of slugs too, buddy. One for every phoney peace creep gets in my way. I'll pile you up out on the lawn. Won't that be something for the peaceful morons to see in the morning?"

The conditioned directive flashed in Jimmy's mind; he knew where the stud was. In the design on wallpaper near the top of the door. He pressed and metal jaws whirred and gave a stolid snap as the door and wall fused into a barrier of steel. Every new project had, on the directive of the Mental Health Authority, been constructed with facilities allowing any apartment or room to be sealed off.

Jimmy walked back across the living room to the phone by the couch. He dialed the number that had clicked in his mind.
"Special Services. Lieutenant Manfred here."
"Watchman Hynes here, sir, on scene. New Sunnydale Apartment project. Northwing, apartment 307: Class-A syndrome, that which must not be named, sir."
"How many victims?"
"One. Mr. Jerald Palmer, resident."
"What about the psycho?"
"Recent sleepwalker name of Hopkins, a neighbor of the Palmers. I sealed him off in the bedroom, but he's got a hostage in there and an antique weapon. Class-AC power hand-gun. He's also got a box of slugs."

## "Witnesses."

"Palmer's daughter, Lois, She's properly cut off or seems to be."
"They usually do seem to be. Quarantine her and stand by."
> "Yes, sir."

"Wait, who is the hostage?"
"Mrs. Palmer. Hopkins threatens to use the weapon on her if we don't let him get away."

The line went dead. Jimmy stood behind Lois murmuring soothing words as he took a plastic vial from his belt kit, broke the antiseptic seal, slid out a glass hypo syringe. He held Lois' arms to her sides with his left arm. With his right hand he gave her a quick skilled injection. She sagged, face softened and flushed with color. As Jimmy eased her down on the couch she smiled and gave a slecpy little laugh. "I've seen you, you're Watchman Jimmy. You're cute."
"So are you, Lois. Now go to sleep."

She yawned. "Goo'night, Watchman."
"Goodnight, Lois. Happy dreams."

He stood, frowned down at her tranquil face. You could never tell. They were all conditioned to blot away and blank out certain contagious sights and sounds. But you could never be sure. Something contaminating kept slipping through here and there, germinated in secret, burst out later, like with Hopkins.

But that was a MHC problem. Jimmy could only watch and be ready. Ready to seal everything off. Erase evidence. Clean, rinse, sterilize . . .

Lt. Manfred appeared to be weary except for bright little eyes
working everything in the apartment over with quick selective skill. He wore a sagging gray topcoat. He had thinning hair. He studied Jimmy awhile with the direct unblinking gaze of microscopic lenses, while two men in the disguising clothes of ordinary citizens entered, unfolded a stretcher, put Lois on it and carried her out of the apartment.

Then Lt. Manfred walked around the foot of the corpse and listened at the bedroom door.
"It's sealed," Jimmy reminded him.
"Oh yes." Lt. Manfred looked at his watch. Then he looked through the window at the moonlight. There was no sound anywhere until he finally spoke. "Yes-another sleepwalker."
"Less than a month ago," Jimmy said.
"No doubt now at the clinics I'm sure. Sleepwalking's definitely a symptom of contagion. They nearly always move after dark and they're never conscious of doing it. But they're compelled, against their conscious desires. That's the power of the damn thing!"
"I know," Jimmy said.
"They find lethal items hidden out there in the dark. Could never find them awake-wouldn't even know about such things. They bring them back, hide them-and later they go psycho. That's the pattern."
"I know that, sir."

Lt. Manfred turned. "Oh yes, you're Hynes. I work with so many, I sometimes forget."
"I understand, sir."
"And you look so young. But age isn't a factor at all is it? Of course not. Has nothing to do with relative immunity. They don't know what makes some less vulnerable than others. Some like Hopkins can't resist at all. Why not? Why him?"

Jimmy watched Lt. Manfred's face with growing suspicion. He didn't answer.
"Why in some do brain adhesions unseal so easily and release discovery after vicious discovery supposed to have been buried? Poor devils." His mouth was set hard for a moment. "But then I suppose it can never matter much why some are less vulnerable than others when all of us are vulner-able-to some degree. Right?"
"Yes, sir." Jimmy's skin tightened. Why was Lt. Manfred emphasizing the obvious? Was he just thinking, speculating out loud, or was he dubious of Jimmy. Careful perhaps, cautious, testing possible weakness. Testing Jimmy's power of resistence, the degree of awareness he could tolerate.

Jimmy wiped his mouth on the sleeve of his uniform.
"Come along, Hynes." Lt. Manfred looked at his watch, smiled a little. "Odd how they usually cooperate with us and act at nights, as if they know. we can never do our
work during the rather harshly revealing light of day. They seem compelled to help us. Wonder why?"
"I wouldn't know, sir. I'm only a Watchman."
"Just as I am basically. Mustn't speculate on clinical matters, right? Isn't healthy is it?"
"I can't see what use it could be," Jimmy said.

Jimmy followed Manfred into the hall and sealed off the main apartment door. In the elevator, he had a tight queer feeling as though he were made of glass and that the slightest thing might shatter him

There was only sporadic emergency traffic after curfew. Their Special Services car that had been waiting for them outside the North wing was now the only car on the road. Its motor made no more sound than the sealed-off sleeping breaths from thousands of blackedout apartments.

Jimmy followed Lt. Manfred, who carried a black nylon bag, down a corridor on the third floor of Statesville MHC Quarantine and Confinement Center No. 294. At the end of the corridor, a male attendant looked up from behind a steel desk. There was nothing on top of it but a console board flickering. He looked at Lt. Manfred's Peace Police card and stood up quickly. "Yes, sir?"

Lt. Manfred smiled. "Closed
ward five, I believe, a permanent specimen, number 76 is it? I think that would be in the new Retained For Continued Research Sector."

The nurse was already checking through a wall-projected file. "Yes, number 76. Preserved research specimen, involuntary. Cataleptic ward. You want him?"
"Yes, for two hours."
"Purpose? Strictly an official form enquiry."
"Of course. The purpose isPeace."
"Yes, sir," the attendant said nervously, and pressed a button. Steel double doors behind the attendant opened. "Three doors down, on your right. It opens automatically from the outside."
"I know, thank you," Lt. Manfred said.

Jimmy couldn't remember if he had been here before.

There were probably things he couldn't remember, and even more reasons why he never would, or never should

Number 76 sat motionless on a steel shelf. It was built out of the wall in a small square room and was the only furnishing. His closecropped head, small for the spread of his shoulders, was scarred and the same width as his neck. His skin was pale and flaccid as he looked steadily up at an out-ofreach window wand toward a hazed hint of moonlight. He gave no reaction when Lt. Manfred and Jimmy entered.

Lt. Manfred turned the man's face down from the faint light. It remained lax. His eyes were dull and mildewed and reflected nothing.
"You seen this one before, Hynes?"
"I don't think I have, sir. I don't remember if I've ever handled this kind of emergency before. I mean when you need to use one of the old ones."

Lt. Manfred's grin was quick, hard and sour. " 76 had a rather revered name once. Chief Bane. One of the best. I've used him before."
"W'e need him because of Mrs. Palmer?"
"Partly. Sometimes it isn't easy to apprehend and quarantine a psycho. They aren't usually armed lethally like Hopkins, or threaten us with a hostage. Under special circumstances demanding violence, we need a special agent like Chief Bane." Lt. Manfred's face was suddenly tired and drawn. "Yes, we keep some reserved for the dirty work. The work we can't touch because we're too clean. We can't go that far can we, Hynes? We're not that immune are we?"

Jimmy felt that twitch along his mouth. "You don't have to explain all of that, sir. I already know that-"

Lt. Manfred smiled thinly. "Sure you know, Hynes. But there are casualties even among Peace

Watchers. There are replacements even at Headquarters. Someone you know, some morning when you come to the office, you find he's gone. But you do seem to have exceptional resistance and control, Hynes. I'll definitely recommend you to the Board. But you must always keep close watch on yourself."

## "Yes, sir."

"Every case like this is just another test, Hynes, for us. How much you can forget is vital. How much you can remember is vital. It's the delicate balance. Yes, indeed, Hynes. Forget a bit too much, you're gone. Remember too much, you're erased. No on ever knows how long he can go with a minimal degree of operative memory.- You feeling all right, Hynes?"

$$
\begin{aligned}
& \text { "Yes, sir." } \\
& \text { "Good, stay alert now." }
\end{aligned}
$$

Lt. Manfred still held the big man's face between his hands, studying it earnestly. He took the plastic case from his pocket, got out the vial, then the syringe. "Hold him."

Jimmy held the big man from behind during the quick injection. As blood pumped the drug into Bane's brain, Lt. Manfred said in clipped tones, "Calling Headquarters, Chief Bane. Calling Chief Bane, Headquarters. Chief Bane, emergency . . . emergency ..."

The flab turned hard under Jimmy's hands. He lost his grip
and was flung back against the wall. Bane shook his head and exploded to his feet. Transformed by forces deliberately kept dormant in him but now awakened, Bane's face became fierce, even vicious in a cynically grinning way. It turned corrugated above the brows. His hair began to shine and ripple on his skull like a wet animal's pelt. His eyes turned to the brittle shine of gray metal shards. His muscles tensed and swelled. "How the hell did I get tied up here?"
"You ran into some tough characters, Chief. You needed a little therapy."
"Me?"
"You don't remember?"
Bane stared with concentrated absorption. He shook his head. "So what if I don't? Just remind me who the dirty finks are and I'll take it from there."
"First is a special job. Chief. You can do it but no one else can. We wouldn't trust anyone else."

Bane's eye shone as he thrust his bullet head forward. His fingers flexed. "What's the squeal?"

Lt. Manfred put the black bag on the bench, unzipped it, took out a blue uniform and soft black boots. He gave them to Bane who began dressing with fast implacable grace. There was no wasted gesture nor any suggestion of lost balance, of fumbling.

Then he stood resplendent in full uniform. He stomped his pol-
ished boots. He slapped angrily at his belt.
"Where's my forty-five? Where is it. Where's my big bastard?"
"In the bag," Lt. Manfred interrupted quickly, and just as quickly wiped from his face an expression of curious distaste.
"Leave it til we get outside."
Bane frowned. "Who the hell are you giving me orders?"
"The only one who can give you orders, Chief. Don't you even remember your Commissioner?" He smiled. "Let's go."

Lt. Manfred opened the black bag as they approached the door of 307. He turned his face away as he handed Bane the weapon. Bane jerked it from Lt. Manfred's hand with an exultant grunt and spun the cylinder. He thrust himself at once toward the door. Lt. Manfred grabbed his arm. "Wait," he said, and unsealed the door.

Bane's shaven head angled. He didn't understand the heavy metalic grinding in the walls. Such safety innovations had been installed since Bane's quarantine years before.

Jimmy avoided contact with Bane as he bulled in through the door.

Only the black smudge on the rug had changed, spread, turned darker, shone with a slight gleam now like dried shellac. Bane had been briefed. He stepped casually over the corpse and looked at the bedroom door.

Jimmy watched Lt. Manfred unseal the bedroom door then move away along the wall like a shadow. He sensed unwanted memory arousing itself and sending a pervasive fear through him. He shuffled backward into the wall. Lt. Manfred was there leaning down. He studied Jimmy a moment, looked quickly away. Too quickly. Jimmy hoped it didn't show on his face, but inside somewhere deep, something itched and crawled like a spider. Something he dared not even name, not cien as an aware Watchman. It wasn't purged. It wasn't gone. It was there still, cached away somewhere, hiding and waiting in the mind forever.

He watched Bane and was sickened not by Bane but by himself. He recognized the flickering admission of his own hunger, his own fascination at what he saw. He should feel that this was only an unavoidable necessity in the cause of Peace. But as he watched Bane his own pulse pounded faster. He watched Bane's power and violence eager and free for release and envied him. He began to smell the acrid, residual chemistry of violent interaction building up. He reached up, felt saliva on the back of his hand.

He felt the exhilarating concentration with which Bane studied the door. He could feel the horrible antique power gun coming up to shine in the light, to dance like something viciously alive, an iri-
descent blue-black thing, snubsnouted, eager, hungry, horribly beautiful in some way. It glinted uncertainly then as through a film. It seemed to melt down like chocolate

Lt. Manfred looked out the window again, checked his watch. Jimmy slowly ran the flat of his hand along his wet mouth. Of course it had to be cleaned out before daylight. It must not be scen. Nothing spread so fast and was so all-consuming as mental contagion. Horror seemed to branch out everywhere in the darkness outside the window, out there in the darkness surrounding all the sealed off senses and blinded eyes of night.

He looked away from the window and the night. He had thought for an instant it was snowing. But it was summer. He thought he had seen it through the clean sterile moonlight. The falling of slow and sooty snow.
"U'nderstand you're to try and save the woman," Lt. Manfred said. Was he really as controlled, as cool as his voice sounded? Who really knew? Who could know? Who really knew about any of them. Who knew about himself? What if Mrs. Palmer was saved, quarantined, cleaned out and returned to the project?

You never knew if they were entirely clean.
"Slim chance to save her," Bane said flatly. He moved slowly toward the bedroom door again, grinning.

He stopped. He took another step. Grinning, tantalizing himself with his own slowness, dallying with it, playing with it, loving what the world must not even name. Finding it sweet .

Jimmy's sweating hands slid flat across smudging wallpaper. His breath burned. He knew that look of Bane's now, that look of heavy anticipation. He had associated the look always before only with loving a woman. But he must never think of that vile comparison again -never-never-again-
"I bust in," Bane was saying. "Speed, surprise might do it. Depends if he opens on her before me. If he doesn't I can get him first. If he does, the woman's gone, that's all. Unless I can get him quick enough, right in the head say."

Lt. Manfred wore an odd smile, straight and all teeth. "If anyone can do it, Chief, it's you."

Bane shrugged. He took one more long stride to the door. Mouth firm, eyes watchful, his entire body poised and attuned to very special and unspeakable actions, he laughed. He laughed low and soft but with some kind of special ecstasy. Then he hit the light switch. The room went dark but for a column of moonlight that seemed to cover everything with a faint shine of frost. In the moonlight Bane was etched out in a primitive pattern of charcoal. The weapon glinted. Jimmy heard the splintering impact as Bane crashed
through the door. Blasts pounded Jimmy's head. He wanted to find the door, get out, get away. But something in him bound him to the wall in that block of frozen fascination. He reached, found, gripped Lt. Manfred's arm.
"Help me, sir," he said.
He didn't hear Lt. Manfred answer. Flat roaring explosions rolled out of the bedroom. The walls quivered. Fire seared Jimmy's eyes.

Screams-
A high breaking cry . . .
Silence stretched the moonlight as Jimmy waited. His breathing was quick and hard and his mouth was open and dry. He thought something cold was crawling down the cramping walls in the dark. It seemed to bend his body. It reached for his brain. He moved away from the wall, kept moving, made himself find the switch and bring back the light.

Bane leaned against the wall by the shattered door into the bedroom. His right hand pressed into his stomach as though his thick fingers were squeezing a tomato. Jimmy stopped. He bent with arms folded into his own belly, while out of what ought to have been an immense safe stretch of time and clinics, jealous and naked patterns repeated with savage desires.
"He got her all right, first thing," Bane said, his voice still sounding strong, but with a long space be-
tween each word. "First thing." His face was gray. It sagged under his eyes. His eyes did not seem like eyes now, but like black holes shot there with a gun. His chuckling laugh sounded like an animal noise. "But I fixed that nut though. He was frothing, that kind . . . I put him away . . . for good that one . . . for the freezer . . . call . . . call . . . meat . . . wagon

He started to fall. He straightened. His eyes flared up again for a moment as though the pain and horror of that which must not even be named in the light of day, had brightened and sharpened him to some inhuman degree of clearmindedness. Then he collapsed on the floor.

Lt. Manfred went into the bedroom and came back out. He moved slowly and seemed very tired. He hesitated, then knelt down beside Bane.
"His last job for us. Four holes in him."

Lt. Manfred put one hand over his eyes. "They feel so good doing it. It makes for a tough cure, you know. But when they're all gone, I mean the ones like Bane, when they're gone, who'll do the dirty work. Who'll do it then, Hynes?"

Jimmy's mouth felt partly paralyzed. "Maybe by then we won't need them."
"No?" He looked down at Bane's face. "He still looks happy, see? Something about it is horribly
beautiful to them. Sometimes I almost wish I could remember-"

Jimmy leaned against the wall. "Who was he? I mean, before?"
"Some local Chief of Police." Lt. Manfred's grin was only on his mouth. "Not the Peace Police of course."

Everything actually had been carefully timed. .

A minute later the cleanup men arrived. They wore special suits, although they looked on the outside like ordinary everyday clothing. They went to work with their sprayguns. They hummed from the bedroom.

First the dissolving fluid.
Then the sterilizing spray.
While Lt. Manfred called Control Central.
"Peace Police, Field," He said. "Lt. Manfred reporting K-58 cleaned up. Please list apartment 307, Sunnydale Project, vacated, cleaned, ready for occupancy. Thank you."

He replaced the receiver.
The cleanup men finished with the bedroom. They came into the living room. The dissolving gun made two long, slow, but steadily consuming sweeps of its nozzle.

The remaining stuff of Bane and Palmer, stains, every sort of leftover, dissolved. Disappeared.

Antispetic spray hissed everywhere, settled in a dew, quickly evaporated.

Then the cleanup men went out into the hallway and shut the door.
"Ready, Jimmy?"
Jimmy looked at Lt. Manfred. His face was not altogether clear. A mist seemed to have gathered between them as Jimmy tried to speak, tried to push himself away from the wall, but was afraid to cast off from it again. Something in him no longer seemed safely battened down at all-

Lt. Manfred's eyes swam up clear, and close, gentle and understanding. They shone with a warm unspoken nexus of common binding memories.

The Peace Police officer's hand came up into view. The hypodermic syringe shone as the plunger moved back and a needle curved down.
"Nothing to be ashamed of," Lt. Manfred said gently. "Much we can't know, but one thing we dowe know that any of us can lose control and fail to resist. It always happens, sooner or later."
"How many times?"
"We can't know that. It wouldn't help if we did."
"That's why we have to keep a
constant check on one another?"
"Yes, Jimmy. And none of us can know how many times we give way. Because each time we know, we have to forget. Forget often and long enough. Well-it should finally be dead forever. One day there'll be nothing to forget."

Something tingled through Jimmy like tiny shivers of glass. "How often does it happen everywhere, every night?" A warning signal flashed in his brain, pulled him up.

I'm afraid that wouldn't be wise to know either, Hynes. But quite often I imagine. However they'll be weeded out. Someday there'll be nothing anyone will have to remember or forget. Remember to forget, or forget to remember-" He coughed slightly, then pressed his lips together. For a moment his eyes wandered as if he were thinking of some other time or place, then he frowned. "That's the thing, Hymes. Everything's got to be completely sterilized everywhere. Absolutely clean. Or there won't be anything. Will there?"

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He smiled a bit sadly perhaps at Jinmy. He raised the syringe. Jimmy winced. "They'll give me mine, too, Jimmy, at Headquarters. Don't worry. It's nothing special for you. We all get it."
"Is that the truth, sir?"
"Sure it is. So until next time, Watchman, good work. And happy dreams."

There was a vast burning pulse when the needle went in.

How many other times, he wondered again, and maybe he had always wondered about that. He also knew, as he stopped knowing anything, that that was one of the most important items one should always forget .

Watchman Jimmy finished the last round of his night's beat. Day poured smiling over the project and bubbled between the buildings. It sparkled and danced over parks and playgrounds. Chimes
sounded the end of curfew as windows and doors unsealed and opened to the clear, crisp purified air.

Voices, radios, electric humming, distant traffic warmed to a vast and happy drone.

Jimmy started whistling as he walked out of the project toward the homebound tube. He smiled serenely at a very blue and empty sky. The clean newness of his world seemed even cleaner and fresher and newer in early morning air. The sun itself might have been new.

As he looked back, he stopped whistling a moment. That face watching him from that corner window of the Northwing.

He knew every tenant. But he was sure he had never seen that face before.

Must be a new tenant in 307.
He waved.
"Welcome, neighbor," he said.


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Thirty-one year old Jack Sharkey, piano-player and composer, ex-PFC (Special Sevices), ex-high school teacher (English), exadvertising copy writer (Sears, Roebuck), ex-unsuccessful freelance writer, is the author of THE SECRET MARTIANS (Ace), two crime novels-MURDER, MAESTRO, PLEASE, and DEATH FOR AULD LANG SYNE (Abelard-Schuman; Holt, Rinehart \& Winston), numerous stories in other SF magazines, and non-SF stories and humor articles in the slick magazines, "most notably Playboy." He took time out last July 14 to get married, in which project he was assisted by the ex-Miss Patricia Walsh of Chicago: since Mr. Sharkey drove a Renault Dauphine and Miss Walsh was a French teacher, "Bastille Day seemed singularly appropriate." This story of Bob Terrill and Valerie his wife, may perhaps bring tremors to other mature (we do not say, "middle-aged") husbands of beautiful young wives: but not to us. Of course, we do have this tooth that's been bothering us, butNonsense! Piffe! Readers, read on.

## TRADE-IN

## by Jack Sharkey

Hf felt the pain-a sharp, short knife-jab of pain - as he was rinsing his mouth out after a thorough brushing. Seeking the source, he pushed his upper lip away from the teeth, exposing healthy pink gums and bright white incisors. He prodded, pushed, tugged - And felt the pain again. More annoyed than anything else, he rinsed and dried his hands and went back into the bedroom.
"Do you know," he said musing-
ly to the figure that lay curled beneath the bedclothes, "I believe I have a loose tooth."

The figure stirred, and a sigh found its way through the dark green blanket and rumpled counterpane, then Valerie emerged slowly at the upper end of the tangle, like some honey-haired young moth forcing an egress from a flaccid cocoon, and regarded him steadily with sleepy brown eyes.
"Bump it?" she inquired.
"No - At least, not that I can recall. Though I'm sure I'd remember a bump heavy enough to loosen a tooth. It's a front one."
"Let me see," said Valerie, hunching up on her elbows till the pillow supported her back against the headboard, and she could lift her hands to push back the tangled skein of her hair from the pleasantly long face, with its pointed chin.
"Here," said Bob, sitting on the edge of the bed and leaning toward her. His forefinger pried up his lip again, and he said, slightly incoherent through the interference, "Th' fron' one - Onna righ'.

Valerie obediently took the indicated incisor between her thumb and forefinger and gave it a little wiggle. Bob instantly said, "Mmmph!" and pulled away, compressing his lips over the area. "See?" he said, after the flash of pain had subsided.

Valerie nodded. "It looks all right, though . . ."
"Maybe it's in the root," he said, with unenthusiastic self-diagnosis. "I wonder if I bit into something too hard-?"
"Shall I call the dentist?" his wife suggested, with calm concern, sliding over toward the bedside phone.
"What for?" he said, with sharp abruptness. Valerie simply lay there and looked up into his face until he reddened, and mumbled,
"I- I guess maybe you'd better."
While she dialed, he arose and began to dress, trying not to listen to her conversation. Despite himself, however, he paused in the midst of pulling on one sock as she repeated the time of the appointment aloud. "Today?" he said, with a quite boyish pout, as Valerie replaced the receiver and slid out of bed on the side opposite where he sat. "He can't be a very good dentist if he has so much open time."
"He's excellent," said Valerie, standing in the bathroom doorway. "He had a cancellation."

Bob moistened his lips, then said, "You know - It doesn't have as much of a sting as it did Maybe it was a touch of neuralgia, or something . . ." In the doorway, Valerie repressed a smile, and just looked at him until his gaze dropped.
"All right," he said, just as though she'd been vocally insistent. "All right!"
"Two o'clock," she said, before shutting the bathroom door. "I'll call you at work at one-thirty and remind you."
"I'll remember!" he said irritably to the closing door. When he was sure it was quite closed, he added, "I won't be able to think of anything else today!"

Dr. Haufen stood by the window a long time, studying the small, still-damp X-ray negative
in the tiny clamp. Bob, slumped quietly in the chair with his head well back in the padded grip of the headrest, tried not to clutch the ends of the chair arms too tightly, and his gaze unconsciously avoided looking at the array of glittering steel instruments on the milky round glass shelf level with his chin, nor did he let himself even think about the corded drill that nearly overhung his perch like the single claw of a onelegged mantis.
"Mr. Terrill," the dentist said, finally turning to face him, a small frown between his neat grey eyebrows, "how old did you say you were?"

The question was unexpected. Bob sat up a little taller in the chair, his head free of the rest. "Thirty-six."

The dentist nodded slowly, and then hung the clamp, with the negative still in its rubber jaws, on a small nail beside the drug cabinet, then began puttering - almost distractedly - among some odds and ends of cotton, wire and bottled anodynes on the ledge beneath it. He seemed to be thinking.
"What's wrong with the tooth?" demanded Bob. "Is it broken, infected, or what?"

Dr. Haufen turned to face him. "It's dying," he said. "The nerve is nearly gone, and the periostial membrane has weakened considerably. It must come out, of course."
"Out?" Bob echoed stupidly. "A front tooth?" He considered this possibility numbly, then with weary fortitude. "I- I suppose you can make me some kind of false one, can't you? One of those pivot-teeth? I can't attend to business with a black gap at the front of my mouth. I have to meet a lot of people, smile an awful lot . . ."
"I can make you artificial dentures," the dentist nodded. "It will be less expense, in the long run, if we wait for the others to come out, first, however."

Bob's stomach seemed suddenly filled with slowly congealing gelatine. "Others," he said, savoring the sound of the word before letting his mind apprehend its meaning. Then, "You mean I'm going to lose some more?"

The dentist seemed to come to a decision. Almost confidentially, he leaned closer. "Mr. Terrill," he said gently, "I realize that your wife, a lovely woman, is but thirty years of age. I find it quite understandable that you may haveshall we say - pared the facts a bit when you married her. I mean, a man is young as he feels, there's no gainsaying that, and to pass up an opportunity for marriage simply because of a mathematical fact would be folly in the extreme-"
"Wait, hold on, Doctor . . ." said Bob, sitting up very straight in the chair, now. "What are you saying? What are you trying to imply?"

The dentist's smile was tolerant as he lifted the clamp from the drug cabinet once more, and held up the X-ray negative to emphasize his point. "People sometimes-for really sound motives-deceive others. But an X-ray cannot lie."
"I don't understand," said Bob, feeling sick and faint with apprehension. "What do you mean?"
"Simply that your claim to be thirty-six," said Dr. Haufen, with a tiny shrug, "in lieu of the evidence on this exposed plate, is quite preposterous."
"But Doctor-!" Bob blurted, confused. "I am thirty-six!"
"Not according to this," said the dentist, holding out the negative for Bob's perusal. Bob stared at the grey-and-white-prong-shapes against the glossy black background on the photograph, and shook his head.
"That means nothing to me," he said. "I have no idea what you're driving at."
"All right," said Haufen. "I'll spell it out for you. On your unsupported word, you are thirty-six years of age. Where, then, did you get the teeth of a man easily twice that old?"

Bob's grip on the chair arms relaxed, and he slid downward until the head-rest stopped his descent. "But I am thirty-six . . .!"

The doctor again smiled his tolerant smile, and turned away to the shelf under the drug cabinet, selecting his instruments with
practiced care. "Just as you say, Mr. Terrill," he said, in a soothing tone that implied lack of interest in the other's usage of the truth. "The main thing to do is to get that tooth out. Afterward," he continued, his back still toward the chair, "I would really appreciate your telling me hoy you keep your voice and face looking so youthful-"

In mid-sentence, he had turned back again, a wad of cotton, dipped in a mild scarlet anesthetic to be rubbed upon the gum about the bothersome tooth before extraction, held in a shiny set of steel forceps. But there was no one in the chair to hear the end of the sentence, so he stopped, gave an insouciant shrug (the bill for consultation would be sent anyway), and dropped the wet cotton into a metal wastebasket.

He saw the glow of flickering yellow candlelight out on the terrace as he repocketed his key and crossed the living room toward the bedroom. The candles, he noted with a guilty pang, were melted more than halfway down, on the white-naperied table, between the polished silver and gleaming china. He looked at his watch, and saw that it was nearly half past seven. The faint odor of prepared food told him that dinner must have long ago grown cold in the kitchen.

Feeling miserably culpable, he pushed open the bedroom door.

Valerie, sitting white-faced and silent beside the phone, jumped to her feet, and a flush of color leapt into her cheeks. "Your office called," she said, her normally well-modulated voice a bit shaky. "They wondered if you were all right." She came to him, then, slid her arms about his waist, and pressed the side of her face against his chest. "I was just going to call the police," she murmured. "I gave you until half-past seven."
"I'm sorry," he said sincerely. "Was it bad?" Valerie leaned her head back to look up into his face. "The dentist's, I mean?"

Bob slid his own arms about her to keep her from leaning any further away. "Pretty bad," he said with great honesty. "One of the worst experiences I ever had in my life."
"Let me see the tooth," said his wife, tilting her head for a look between his lips. "Does it hurt? Did he fill it?"
"Not exactly," Bob mumbled, his hand pressing her head gently against his chest again, so that he wouldn't have to control his facial muscles against her curious gaze. "He says-He says it has to come out."

> "Oh, Bob!"

The warm sympathy in her voice touched a chord inside his heart, then, and he began to blurt out the entire terrible story. "He must be wrong," he said, when he'd finished. "He's got to be wrong!"
"Well, of course he's wrong!" said Valerie. "You big silly! Spending your entire afternoon roaming the streets, sick with fright - Why didn't you come home?"
"I was afraid to tell you."
"Me? Afraid to tell me?" she asked, with amazement. "For heaven's sake, Bob, why?"

Feeling decidedly stupid, he flung his arms out to the sides, raised his shoulders in á shrug, and slapped his thighs in embarrassed admission of his own idiocy. "Who knows?!" he muttered, turning away. "I don't know what I expected you to do. Certainly not to bite my head off. I don't know why I didn't come home."

Abruptly practical, Valerie said, taking his arm, "Come into the kitchen. Maybe I can salvage some of the dinner."

He let her lead him across the living room and into the kitchen. Another pang of guilt hit him as he saw the wilting salads on the sideboard, the congealed mess that would - at five-forty-five - have been a spicy rarebit, the cold brown toast stuck by its steam-wet underside to the plates. "I'm sorry, Baby," he said, feeling perfectly rotten inside. "All your trouble!"
"Don't be foolish," she laughed. "I can whip up a couple of hamburgers, and you can find the opener and pour some beer, and we'll manage fine."

Her hand on the door to the freezer, she turned her head to-
ward him, her eyes deeply earnest in their pleading. "And the next time your world falls apart at the seams - Come home, huh? Or phone me? Or send a wire?"
"Baby!" he sighed, and pulled her up against him, covering the top of her burnished blonde hair with soft, urgent kisses. "Never again, I promise. No matter what happens, I'll come right home and tell you about it."
"Please do," she said, relaxing against him. "That's what a wife is for." Then, pushing away from his embrace with a no-nonsense air: "Let's get some food in that stomach of yours, first. Then you can cry on my shoulder."

Bob laughed, and started looking for the opener.

The next morning, the tooth hurt worse than before, and its nearby companions were just this side of being comfortable. Valeric had awakened when Bob did, though, and his tooth was the first thing she asked about. He licd chivalrously, ignored the pain when he sipped the icy orange juice beside his breakfast plate, and set off for the office as though in the prime of health, his reward being the sweet memory of her smiling face at the door to their apartment.

His first action at the office, however, was to get out the classified directory and start looking up dentists. It might, he reasoned,
after listing a few in the area, look strange if he took off during working hours for another dental appointment so soon after the first, so he decided to utilize his lunch hour. His waistline could stand to miss a meal.

When he returned to the office at a little past one, however, his face was noticeably greyer, though no one remarked on it. Substantially, each of the two dentists he'd managed to see had said precisely what Dr. Haufen had. His teeth were dying. Of old age. And he himself was only thirty-six, in what should still be the golden years of health.
"It doesn't make any sense!" he told himself furiously. "It's crazy. I can't tell Val what's happening! A man can't tell a young wife that he's suddenly hitting the other side of senile decay!"

After fumbling for a pack of cigarettes that wasn't there, Bob left his desk and crossed the main office between the metallic chattering of the stenographers' desks to the lounge, where the vending machine was. He rummaged for the proper coinage, found it, and tugged the chrome-plated plunger over his favorite brand. It was while gratefully blowing out the first puff from his initial long drag on a hastily lit cigarette that he glanced into the mirror on the front of the machine. The cigarette dropped to the floor, and it was a full minute before he no-
ticed it, and swiftly crunched out its glowing tip under the sole of his shoe. Unbelievingly, he leaned closer to the mirror, and took a really good look.

He couldn't blame it on the lighting. The ceiling of the lounge was alive with fluorescents, and radiated so much cool bluewhite light that he'd have been hard-pressed to find a solitary shadow anywhere in the room. So he had to accept what he saw in the mirror as true.

At forelock and temples, his hair- thick, brown and healthy just that morning, in the bathroom mirror-was subtly streaked with silvery grey. And there was the.merest trace of crinkling about his eyes, giving his skin the appearance of still-soft flesh-colored crepe paper.

He couldn't go back to his desk. It would mean crossing the main office again, and this time surely someone would notice what was happening to him. Bob turned and went out the opposite door of the lounge, crossed the corridor to the self-service elevator, and rode down, not letting himself think. Out on the sidewalk, it was chilly, and he regretted having to leave his light topcoat back in the office. He couldn't, he felt, last out the walk to the subway and the wait on the platform without screaming. He hailed the first cab with an upright flag, and gave his home address.

When Valerie came in from the terrace at his call, her lithe figure still wrapped comfortably in a bright blue terrybloth robe, hei morning coffee still held gracefully over the saucer, words suddenly failed Bob, and he just stood there looking at her, opening and closing his hands.
"The tooth again?" she asked, after a silence, though the tiniest catch in her voice told him she'd sensed there was something else.
"I wish it were just that," he said, approaching her. As he came full into the sunlight that spilled through the glass doors behind her, he saw Valerie's eyes widen, and then the cup and saucer fell from her hands and clattered unnoticed on the carpet.
"Bob- Your hair . . . Your face!"
"Something's wrong," he said, the pale sound of his own voice adding to his fear. "Something's terribly wrong. Two other dentists confirmed what Dr. Haufen said, Val. And now - This!" Dazed, he sank into an armchair and stared at the sodden brown coffeestain on the carpet at his wife's feet. "Thirty-six years old. With the teeth of a septuagenarian, and the looks of a man nearing sixty."

Valerie sank down on the arm of the chair beside him, found his hands, and held them between her own. "You'd better get into bed," she said. "I'll call the doctor."
"What for?!" said Bob, suddenly snappish. "So he can smirk at me and ask my real age?'
"You must have something Maybe a vitamin shortage," Valerie said, breathlessly, "or it's overwork, or - or some kind of virus
"Virus!" he spat scornfully. "What virus makes a man age decades in a few days?"
"I don't know," Valerie said, her eyes suddenly filled with tears. "But sitting here won't help. I've got to do something for you
"All right," said Bob, suddenly contrite. "All right, honey. Call the doctor. We'll see what he says."

Hours later, with the last faint streak of sunset pink still glowing on the ceiling of their bedroom, Bob lay silent, smoking listlessly, thinking and pondering and wondering. The doctor had left just a few hours ago. He could find nothing physically wrong with Bob, pronouncing him in great shape for a man his age. "What age?" Valcrie had asked, urgently.

The doctor- a stranger, their own doctor being on vacationturned a curious stare at her. "Upper sixties, I should suppose ." he said, as if awaiting an explanation of her query. When none was forthcoming, he closed his bag, prescribed a pep tonic, and left, with the terrible words, "I'm sure your father will
be feeling much better after a little rest, Miss Terrill."

Neither of them had said anything to disabuse his mind of the understandable error. Bob, suddenly unwilling to face Valerie, or talk to her, had insisted she go out and get the prescription filled. To give himself a bit longer time of seclusion, he had falsified a sudden craving for peppermint schnapps, knowing that Valerie would have to travel far uptown to the German section to get it, the demand being miniscule anywhere else in the city. She'd assured herself he was comfortable, kissed him fondly, and had gone out. He rather hoped she'd take her time. He missed her awfully, but couldn't stand to watch her face when she looked at his. The pink glow had vanished, and dark blue night was thick in the air of the bedroom when he heard her come into the apartment.

Rather than have to feign pleasure at drinking the syruppy stuff he didn't really like, he let his eyelids close, and breathed deeply and regularly. After a moment, he felt the light from the living room fall upon his face, and could sense her standing in the doorway, watching him. Then, softly, the door closed, and he could hear her making her way across the living room to the kitchen, to put the bottle away until he was awake again.

He listened, trying to follow her with his mind as she moved
about the apartment. She was closing the cabinet doors in the kitchen. Now she was running herself a glass of water at the tap. Putting the empty tumbler upside down on the drainboard. Opening the refrigerator, taking something out, closing the door. Now the breadbox . . . the cutlery drawer A heavy metallic clunkWhat was it? The coffeepot, on the burner, of course. She was making coffee and fixing a sandwich, or plate of something, for herself.

Oddly miffed, Bob sat up in the bed. Naturally, Valerie had to keep her strength up, but-Bob found that he resented Val's making herself a bite to eat while he lay turning into- He didn't know quite what to call his metamorphosis. The antic term Instant Methuselah flickered in his mind, and he shuddered.

Now Val was coming back into the living room. He lay back, ready to feign sleep if she entered the bedroom. But after a slight pause in the living room, she went out onto the terrace. Bob opened his eyes.

The moon had risen while he lay there, and the city through the bedroom window lay dusted with steely blue radiance, the pebbled-and-tarred rooftops turning into shimmering fields of diamond. Bob got up quietly and stepped to the bedroom window. It did not itself give upon the terrace, but by
leaning far to one side, he could see his wife. Valerie was standing sipping a steaming cup of coffee, facing outward, her back to him. Her sandwich lay half-eaten on a small plate atop the terrace's low stone wall, between her slender body and the giddy drop to the street. Under the spell of the lowhanging silver moon, her blonde hair was like coiled metal, luminous tendrils of soft foam falling to her shoulders in a beautiful cascade.

She stood so still she might have been carved from ivory, from ice, from cloudy crystal. She'd never been more lovely than at that moment. Suddenly, Bob wanted to be with her. He turned from the window and started for the bedroom door. The soft moonlight could be kind to him, kind to his grey hair and wrinkling skin. This might be his final chance to be with her looking somewhat as he used to. Any aging of his body might easily be attributed to the inconstant glow of the moon, grey hair becoming a mere highlight, a wrinkle a mere shadow, his stooped form a mere trick of the night.

With his hand still on the knob of the half-opened door, Bob paused. There was an indeterminate emptiness to the living room Then he saw that the phone was not on the table near the kitchen doorway. That was Valerie's short pause on her way to the
terrace. She'd brought the phone out with her. To call- Whom?

Bob shut the bedroom door again and returned to his bed, pulling the blankets up about his chin. Beside the bed, blue moonlight gleamed softly on the extension phone. Bob looked at it, then lifted it and listened. Nothing but the dial tone. He hung up and lay still, thinking. The bell inside the base jingled slightly, and he knew Val had lifted the receiver of the other phone. He reached out, then stopped himself. To pick up the phone while she dialed the other one would break the circuit. He counted to ten, then slid a finger onto the button bencath the receiver, put the receiver to his ear, then very gently let the button up. A soft, distant burring sound had barely met his ear when it cut off sharply, and a man's voice spoke on the line. "Hello?"
"Marty," said his wife's voice. "This is Val."
"Val?" said the man. Then, "Val Morrison?"

Bob felt a queer pang. Morrison was Val's almost-forgotten maiden name. A cold film of perspiration began to coat his face and limbs as he listened, breathing with nearly stealthy caution, even though his hand covered the mouthpiece.
"Had you given me up for dead?" Val laughed.
"You left the party so abruptly the other night - " the man said
ruefully. Bob's mind flashed backward. The other night. Just the week before, he'd been out of town on an overnight business trip. He'd phoned, but no one had answered. Val told him she'd taken a sleeping pill before retiring, that night. But it wăs the only night she could have been out without his knowledge. Feeling cold and sick inside, he kept listening.

Their voices, their speech, struck a familiar chord. The conversation could almost have been one of his own, with Val, before they were married. Uneasy memories moved across his consciousness, in an aura of ominous pertinence - Dates she had not kept, sudden disappearances in midevening, determined avoidance of questions regarding her address, her past, even her marital status

There was a pattern to this, Bob began to realize. But a puzzling pattern. Where did its threads lead? What did it all mean?

Bob couldn't think such thoughts for long. They scared him, conjured up horrors inside his mind that nearly blacked him out with fear. Without knowing why, he decided to go out, to get away from Val - Young, beautiful, vibrant Val-and think. Think, while his mind was still clear.

His hands trembling, hard to control, Bob took the phone from
his ear, almost hung it up, then didn't dare risk the sound it might make on the line. He slid the receiver beneath the pillow, then got up out of bed, fought against the pain that racked his legs and back, and hobbled across the room to the chair on which his clothing was folded.

The belt had to be tightened two extra notches. His shirt collar hung away from his vulture's neck, even with the necktie pulled into a clumsy knot against it. In the moonlight, a shock of hair fell across his eyes, and Bob saw that it was snowy white, and that the hand which brushed it fitfully back was speckled with brown, and networked with distended blue veins. He couldn't manage his shoelaces; bending to fasten them made him horribly giddy.

Gasping, finding it harder and harder to see, Bob got somehow to the door, supported himself by his grasp on the knob until a wave of sick vertigo passed, then opened it and moved cautiously into the living room. He looked toward the terrace. He stopped, frozen with fear.

Valerie was at the terrace doors in sharp silhouette, standing like some ancient terrible goddess with the full moon at her back against the vaulted sky, her face dark and unseen amid the fustrous twining aurora of her hair. "Why, Bob," she said, starting toward him. "Feeling better?"
"Yes - No. I- I'm dizzy," he said, feeling unaccountable panic. "I want to go out, take a walk." The voice that spoke with his lips was a croaking shadow of the voice that had been his. "Air -" he invented frantically. "I need fresh air."
"I'll help you out onto the terrace," said his wife, coming smoothly toward him. "It's a lovely night." Then she had his arm in hers, and was smiling at him. Smiling down at him.

Bob hadn't known his bones could dry so much in so short a time. Beside her, he was a gibbering, grey little monkey-creature in clothes far too large for him, raising gnarled hands to ward offWhat? The warmth of her flesh where she touched him burnt like hot irons. Her perfume was musky, overpowering. Weakly, trying to resist with limbs that would scarcely move, he let himself be led onto the terrace, trying to speak with a mouth that only drooled wetly down his chest, blinking wild rheumy eyes that barely focussed on objects anymore. Val assisted him onto a cold, canvas-and-metal chair on the moonlit terrace. "You're tired," she crooned. "You should rest."

A paralyzing lassitude seeped along his bones like cool water. He was sick, weary, spent. The moonlight hurt his eyes. Life was suddenly an intolerable burden. With an effort, he brought his eyes to
sharp focus on the face of his wife. The young, lovely face that belonged to a girl barely out of her teens. Some hidden reserve of strength flowed into him, then, something that fought the creak of brittle ribs beneath icy skin, and let him speak.
"Who are you?" he said, numbly. "What are you?!"

Val, radiant in the moonlight, folded her arms and looked at him with reluctant respect. Abruptly, dropping the facade of solicitude, she said, as if quoting "'Hunger, Emptiness, Voracity, having no life of my own, only such life as can be drained from others. I, and others like me, have access to the Book of Age, wherein is recorded the allotted span of years of all the peoples of Earth.' " Her voice was hollow, dull, and incredibly exhausted. "To have even the semblance of life, I must steal the future from such as you. You would have lived to be cighty."

She sat upon the low terrace wall, watching him. Bob held himself conscious with an effort, then said, "How?"

Val smiled. It was not affection, it was triumph. Weary triumph. "By marriage, you willed to be one with me. You joined your life to mine, mine which is not life, but the craving for it. Every touch of my hand, every brush of my lips, every embrace, has drained 'you. You cannot pit an eighty-year lifespan against eternal emptiness
and hope to win. The years that would have been yours are now mine."

Furry blackness was closing in, slowly botting the sky and the stark white moon from his vision. With an effort that sent sharp knives of pain through his tottering body, Bob lurched to his feet. He clung to the chair arms to support himself. "You can't have my years."

Val looked from him to the edge of the terrace before him, and shook her head. "Don't. It will do you no good," she said, outguessing him. "If you die of age or accident, now, it will make no difference. Your years are mine."

A hundred thoughts leaped through his mind in that moment. Thoughts of the many haggard husbands of blooming wives, of man's lifespan being statistically shorter than woman's, of the great secrecy women relentlessly keep about their ages. "Ghouls," he gasped out. "You're all ghouls!"

He suddenly began to cry, like a little boy. He sank with creaking agony to his knees, then sprawled at her feet on the stone floor of the terrace, the shriveled offering at the feet of the seated goddess. "Mercy," he whispered.

Valerie laughed. It sounded mocking, derisive.

And the sound sparked one last wave of strength through his dwindling consciousness, sent a final flare of angry heat through the
heart beneath his bony ribcage. Bob grasped her ankles in his contorted fingers and lifted them high as he was able, screaming out in the agony it cost him. He heard her scream mingle with his own, then Valerie's ankles were wrenched from his grasp.

The scream dwindled, faded, and when Bob fell backward and looked up, the low wall of the terrace was empty. He felt the same pain Val felt at the awful instant when she struck the street, then something snapped like an overstrained cable, and he was suddenly at peace.

It was half an hour before he was strong enough to stand. His clothing fit much better. By the
time he'd gotten to the elevator, his hair was no longer white, but its former dark shade. As he emerged in the lobby, he felt better than ever before in his life.

Out in the street, late night traffic spun by the apartment building, roaring metal giants towed by bright cones of light at the front. Bob looked beneath the spinning wheels of the passing cars for Valerie, for some sign of her. But there was no blood, no body, no disturbance anywhere on the pavement. He finally found the rag bundle that had been her clothing. It lay by the curb, in the gutter, smelling faintly of decay, and filled only with a thin powdering of grey and ancient dust.

## TIME-BOMB

This is the bomb
That dooms us all;
Made by Mom;
Pear-shaped, small.
Involves no fission,
No fiery mess;
Just malnutrition
And Togetherness.
Gentlemen, the Womb:
(Boom!)

## THE SCIENCE SPRINGBOARD

## MEDICAL RADIOTRACERS

## by Theodore L. Thomas

Medical diagnostic procedures have spawned a brawling youngster known as scanning. When a radioactive scanning agent is administered to a patient, usually by injection, it accumulates in specific tissues or organs. A low-energy gamma ray detector picks up the radiation outside the body. In this way the organs or the tissues can be mapped. Diseased tissue or a tumor may show up as a region of reduced uptake of the scanning agent. In this manner the surgeon can locate the tumor and get some idea of its size.

The effectiveness of the scanning procedure depends largely on the specificity of the scanning agent; it should congregate cleanly in one organ or in certain tissue without causing harmful side effects. The list of such agents is suprisingly long.

The radiotracer scanning agents used to scan the brain for tumors include many compounds such as diiodofluorescein that contain iodine-131. Other brainscanning agents contain radioactive atoms of copper or arsenic or chromium or bismuth or mercury, and there are other useful isotopes.

There's a fair list of scanning agents for the kidneys, and the specificity of many iodine compounds for the thyroid has long been known. Certain dyes can be tagged and used to scan the liver. Tagged amino acids go to the pancreas. Tagged red blood cells from a patient can be used to scan his spleen. The heart, and even bone, all now have their specific scanning agents. The list of such agents is just getting started.

Think how convenient it will be when a scanning agent is finally perfected that is specific for, say, the finger tissue. Radioactive fingerprints will be deposited everywhere, even inside a glove. Radiotracers specific for tissues on the soles of the feet will insure that radioactive footprints will be left wherever a man walks. Police work will be a cinch.

But the system could get out of hand. The parts of the human body could be labelled to set up patterns that are unique to each individual. Everybody could be identified by scanning as he walked down the street. The day may not be too far off for this kind of thing, either. Say another 20 years. In 1984.

A near-murder occurred in a little suburban house on Long Island not many years ago; asked why, the near-murderer replied, simply, "She made me put socks over my shoes to keep from scratching the polish . . ." Kit Reed, herself a housewife as well as a writerbut we will say no more: Read. Read. Read Reed.

## CYNOSURE

## by Kit Reed

"Now Polly Ann, Mrs. Brainurd might not like children, so I want you to go into the bedroom with Puff and Ambrose till we find out."

Polly Ann pulled her ruffles down over her ten-year-old paunch and picked up the cat, sausage curls bobbing as she went. "Yes Mama." She closed the bedroom door behind her and opened it again with a juicy, preadolescent giggle. "Ambrose made a puddle on the rug."

The three-note door chime sounded: Bong BONG Bong.

Norma motioned frantically. "Never mind."
"All ri-ight." The door closed on Polly Ann.

Then, giving her acqua faille pouf pillows a pat and running her hand over the limed oak television set, Norma Thayer, housewife, went to answer the door.

She had been working at being a housewife for years. She cleaned
and cooked and went to PT-A and bought every single new appliance advertised and just now she was a little sensitive about the whole thing because clean as she would, her husband had just left her, when there wasn't even an Other Woman to take the blame. Norma would have to be extra careful about herself from now on, being divorced as she wasespecially now, when she and Polly Ann were getting started in a new neighborhood. They had a good start, really, because their new house in the development looked almost exactly like all the others in the block, except for being pink, and her furniture was the same shape and style as all the other furniture in all the other living rooms, right down to the formica dinette set visible in the dining area; she knew because she had gone around in the dark one night, and looked. But at the same time, she and Polly Ann
didn't have a Daddy to come home at five o'clock, like the other houses did, and even though she and Polly Ann marked their house with wrought-iron numbers and put their garbage out in pastel plastic cans, even though they had centered their best lamp in the picture window and the kitchen was every bit as cute as the brochure said it was, the lack of a Daddy to put out the garbage and pot around in the yard on Saturdays and Sundays, just like everybody else, had put Norma at a distinct disadvantage.

Norma knew, just as well as anybody on the block, that a house was still a house without a Daddy, and things might even run smoother in the long run without all those cigarette butts and dirty pajamas to pick up, but she was something of a pioneer, because she was the first in the neighborhood to actually prove it out.

Now her next door neighbor was paying her first visit and Norma's housewifely heart began to swell. If all went well, Mrs. Brainerd would look at the sectional couch and the rug of salt-and-pepper cotton tweed (backed with rubber foam) and see that Daddy or no, Norma was just as good as any of the housewives in the magazines, and that her dishtowels were just as clean as any in the neighborhood. Then Mrs. Brainerd would offer her a recipe
and invite her to the next day's morning coffee hour which, if she recollected properly, would be held at Mrs. Dowdy's, the lime split-level in the next block.

Patting the front of her Swirl housedress, she opened the door.
"Hello, Mrs. Brainerd."
"Hello," Mrs. Brainerd said. "Call me Clarice." She rubbed her hand along the lintel. "Woodwork looks real nice."
"Xerox," Norma said with a proud little smile, and let her in.
"Brassit on the doorknob," Mrs. Brainerd said.
"Works like a dream. I made some coffee," Norma said. "And a cake
"Never touch cake," Mrs. Brainerd said.
"No greasy feel . . ."
"Metrecookies," Mrs. Brainerd said, and her jaw was white and firm. "And no sugar for me. Sucaryl."
"If you'll just sit down here." Norma patted the contour chair.
"Thanks, no." Mrs. Brainerd smoothed her Swirl housedress and followed Norma into the kitchen.

She was small, slender, lipsticked and perfumed, and she was made of steel. Norma noticed with a guilty pang that Mrs. Brainerd fastened the neck of her housedress with a Sweetheart pin.
"Something special," Mrs. Brainerd said, noticing her looking at it. "Got it with labels from
the Right Kind of Margerine." She brushed past Norma, not even looking at the darling little dining area. "Hm. Stains even bleach can't.reach," she went on, peering into the sink.

Norma flushed. "I know. I scrubbed and scrubbed. I even used straight liquid bleach." She hung her head.
"Well." Clarice Brainerd reached into the pocket of her flowered skirt and came up with a shaker can. "Here," she said. She said it with a beautiful smile.

Norma recognized the brand. "Oh," she said, almost weeping with gratitude.

Clarice Brainerd had already turned to go. "And the can is decorated, so you'd be proud to have it in your living room."
"I know," Norma said, deeply moved. "I'll get two."

Her neighbor was at the back door now. Norma reached out, supplicating. "You're not leaving are you, before you even taste my cake . . ."
"You just try that cleanser," Clarice said. "And I'll be back."
"The morning coffee. I thought you might want me to come to the
"Maybe next time," her neighbor said, trying to be kind. "You know, you might have to entertain them here one day, and ." She looked significantly at the sink. "Just use that," she said reassuringly. "And I'll be back."
"I will." Norma bit her lip, torn between hope and despair. "Oh, I will."
"Cake," said Polly Ann just as the back door closed on Mrs. Brainerd's mechanically articulated smile. She came into the kitchen with Puff, the kitten, and Ambrose, the beagle, trailing dust and hairs behind. "I think Ambrose might be sick." She got herself some grape juice, spilling as she poured. A purple stain began to spread on the sink.

Norma reached out with the cleanser, wanting desperately to ward off the stain.
"He just did it again in the living room," Polly Ann said.

Norma's breath was wrenched from her in a sob. "Oh, no." Putting the cleanser in the little coaster she kept for just that purpose, she headed for the living room with sponge and Glamorene.

The next time Mrs. Brainerd came she stayed for a scant thirty seconds. She stood in the doorway, sniffing the air. Ambrose had Done It again-twice.
"It really does get out stains even bleach can't reach," Norma said, flourishing the cleanser can.
"Everyone knows that," Clarice Brainerd said, passing it off. Then she sniffed. "This will do wonders for your musty rooms," she said, handing Norma a can of aerosol deodorant, and turned without even coming in and closed the door.

Norma spent four days getting ready for the day she invited Mrs. Brainerd to look into the stove. ("I'm having a little trouble with the bottoms of the oven shelves," she confided on the phone. She had just spent days making sure they were immaculate. "I just wondered if you could tell me what to use," she said seductively, thinking that when Clarice Brainerd saw that Norma was worried about dirt in an oven that was cleaner than any oven in the block, she would be awed and dismayed, and she would have to invite Norma to the next day's morning coffee hour.)

At the last minute, Norma had to shoo Polly Ann out of the living room. "I was just making a dress for Ambrose," Polly Ann said, putting on her Mary Janes and picking up her cloth and pins.

Vacuuming frantically, Norma stampeded her down the hall and into her room. "Never mind."
"Arient did the job all right," Mrs. Brainerd said, sniffing the air without even pausing to say hello. "The rest of us have been using it for years."
"I know," Norma said apologetically.

In the kitchen, she spent a long time with her head in the oven. "I don't think you have too much trouble," she said grudgingly. "In fact it looks real nice. But I would take a pin and clear out
those gas jets." Her voice was muffled because of the oven, and for a second Norma had to fight back wild temptation to push her the rest of the way in, and turn on the gas.

Then Clarice said, "It looks real nice. And thanks, I will have some of your cake."
"No greasy feel," Norma said, weak with gratitude. "You'll really sit down for a minute? You'll really have some coffee and sit down?"
"Only for a minute."
Norma got out her best California pottery-the set with the rooster pattern-and within five minutes, she and Mrs. Brainerd were sitting primly in the living room. The organdy curtains billowed and the windows and woodwork shone brightly and for a moment Norma almost imagined that she and Mrs. Brainerd were being photographed in behalf of some product, in her living room, and their picture-in full color-would appear in the very next issue of her favorite magazine.
"I would so love to do flower arrangements," Norma said, made bold by her success.

Mrs. Brainerd wasn't listening. "Maybe join the Garden Club?"
Mrs. Brainerd was looking down. At the rug.
"Or maybe the Music League ." Norma looked down, where Mrs. Brainerd was looking, and
her voice trailed off.
"Cat hairs," said Mrs. Brainerd. "Loose threads."
"Oh. I tried . . ." Norma clapped her hand to her mouth with a muffled wail.
"And scuff marks, on the hall floor . . ." Mrs. Brainerd was shaking her head. "Now, I don't mean to be mean, but if you were to entertain the coffee group, with the house looking like this . . ."
"My daughter was sewing," Norma said faintly. "She knew I was having company, but she came in here. It's a little hard," she said, trying to smile engagingly. "When you have kids

Mrs. Brainerd was on her feet. "The rest of us manage."

Norma managed to keep the sob out of her voice. ". . . and pets . . ."
"The - coffee hours," Norma said, maundering. "The garden club

But Mrs. Brainerd was already gone.

Norma snuffled. "She didn't even mention a product to try."
"I made Ambrose a baby carriage," Polly Ann said, dragging Ambrose through in a box. "Is that lady gone?"
"Gone," Norma said, looking at the way the box had scarred her hardwood floor. "She may be gone forever," she said, and began to cry. "Oh Polly Ann, what can we do? We may have to move to
a less desirable neighborhood."
"Ambrose tipped over Puff's sandbox and got You Know What all over the floor." Polly Ann went outside.

Crumbs, hairs, threads, dust all seemed to converge on Norma then, eddying and swirling, threatening, plunging her into blackest despair. She sank to the couch, too overwhelmed to cry and it was then, looking down, that she spied the magazine protruding from under the rug, and things began to change.

END HOUSEHOLD DRUDGERY,
the advertisement said.
YOUR HOUSE CAN BE THE CYNOSURE OF YOUR NEIGHBORHOOD.
Norma wasn't sure what cynosure meant, but there was a picture of a spotless and shining lady, sitting in the middle of a spotless and shining living room, with an immaculate kitchen just visible through a door behind. Trembling with hope, she cut out the accompanying coupon, noting without a qualm that she would have to liquidate the rest of her savings to afford the product, or machine, or whatever it was. Satisfaction was guaranteed and if she got satisfaction it was worth it, every cent of it.

It was unprepossessing enough when it came.

It was a box, small and corrugated, and inside, wrapped in ex-
celsior, was a small, lavender enamel-covered machine. A nozzle and hose, also lavender, were attached. Curious, Norma began leafing through the instruction book, and as she read she began to smile, because it all became quite plain.
"EFFECTS ARE NOT NECESSARILY PERMANENT," she read aloud, to assuage her conscience. "CAN BE REVERSED BY USING GREEN GAUGE ON THE MACHINE. Oh, Puff," she called, thinking of the white angora hairs which had sullied so many rugs. "Puffy, come here."

The cat came through the door with a look of insolence.
"Come here," Norma said, aiming the nozzle. "Come on, baby," she said, and when Puff approached, she switched on the machine.

A pervasive hum filled the room, faint but distinct.

Expensive or not, it was worth it. She had to admit that none of her household cleansers worked as fast. In less than a second Puff was immobile-walleyed and stiff-backed but immobile, looking particularly fluffy and just as natural as life. Norma arranged the cat artistically in a corner by the TV set and then went looking for Polly Ann's dog. She made Ambrose sit up and beg and just as he snapped for the puppybiscuit she turned on the machine and ossified him in a split-
second. When it was over she propped him on the other side of the television set and carefully put away the machine.

Polly Ann cried quite a bit at first.
"Now, honey, if we ever get tired of them this way, we can reverse the machine and let them run around again. But right now, the house is so clean, and see how cute they are? They can see and hear everything you want them to," she said, quelling the child's sticky tears. "And look, you can dress Ambrose up all you want, and he won't even squirm."
"I guess so," Polly Ann said, smoothing the front of her velvet dress. She gave Ambrose a little poke.
"And see how little dirt they make."

Polly Ann bent Ambrose's paw in a salute. It stayed. "Okay, Momma. I guess you're right."

Mrs. Brainerd thought the dog and cat were very cute. "How did you get them to stay so still?"
"New product," Norma said with a smug smile, and then she wouldn't tell Mrs. Brainerd what product. "I'll get my cake now," she said. "No greasy feel."
"No greasy feel," Mrs. Brainerd said automatically, echoing her, and almost smiled in anticipation.

Moving regally, proud as a queen, Norma brought her coffee tray into the living room. "Now
'about the coffee hour," she said, presuming because Mrs. Brainerd took up her cup and spoon with an almost admiring look, poking with her fork at the chocolate cake. ("I got the stainless with coupons. You know the kind.")
"The coffee hours," Mrs. Brainerd said, almost mesmerized. Then, looking down, "Oh, what on earth is that?"

And already dreading what she would see, Norma followed Mrs. Brainerd's eyes.

There was a puddle, a disinct puddle, forming under the bathroom door, and as the women watched, it massed and began making a sticky trail down the highly polished linoleum of the hall.
"I'd better . . ." Mrs. Brainerd said, getting up.
"I know," Norma said with resignation. "You'd better go." Then, as' she rose and saw her neighbor to the door, she stiffened with a new resolve. "You just come back tomorrow. I can promise you, everything just as neat as pie." Then, because she couldn't help herself, "No greasy feel."
"You know," Mrs. Brainerd said ominously, "This kind of thing can only go on for so long. My time is valuable. There are the coffee hours, and the Canasta group . . ."
"I promise you," Norma said. "You'll envy my way with things. You'll tell all your friends. Just
come back tomorrow. I'll be ready, I promise you . . ."

Clarice deliberated, unconsciously fingering her Good Luck earrings with one carefully groomed hand. "Oh," she said finally, after a pause which left Norma in a near faint from anxiety. "All right."
"You'll see," Norma said to the closing door. "Wait and see if you don't see."

Then she made her way through the spreading pool of water, and knocked on the bathroom door.
"I was making Kool-Ade to sell to all the Daddies," Polly Ann said, gathering all the overflowing cups and jars.
"Come with me, baby," Norma said. "I want you to get all cleaned up and in your very best clothes."

They were all arranged very artistically in the living room, the dog and the cat curled next to the sofa, Polly Ann looking just as pretty as life in her maroon velvet dress with the organdy pinafore. Her eyes were a little glassy and her legs did stick out at a slightly unnatural angle, but Norma had thrown an afghan over one end of the couch, where she was sitting, and thought the effect, in the long run, was just as good as anything she'd ever seen on a television commercial, and almost as pretty as some of the pictures she had seen in magazines. She noticed with a little
pang that there was a certain moist look about the way Polly Ann was watching her, and so she went to the child and patted one waxen hand.
"Don't you worry, honey. When you get big enough to help Momma with her housecleaning, Momma will let you run around for a couple of hours every day. Momma promises."

Then, smoothing the front of her Swirl housedress and refastening her Sweetheart pin, she went to meet Mrs. Brainerd at the door.
"Well," said Mrs. Brainerd in an almost good-natured way. "How nice everything looks."
"No household odor, no stains, no greasy feel to the cake," said Norma anxiously. "This is my little girl."
"What a good child," Mrs. Brainerd said, skirting Polly Ann's legs, which stuck straight out from the couch.
"And our doggy and kitty," Norma said with growing confidence, propping Ambrose against one of Polly Ann's feet because he had begun to slide.

Mrs. Brainerd even smiled. "How cute. How nice."
"Come see the darling kitchen," Norma said, standing so Clarice Brainerd could look into the unclogged drain, the white and pristine sink.
"Just lovely," Clarice said.
"Let me get the cake and cof-
fee," Norma said, leading Clarice Brainerd back to the living room.
"Your windows are just sparkling."
"I know," Norma said, beaming and capable.
"And the rug."
"Glamorene."
"Wonderful." Clarice was hers.
"Here," Norma said, plying her with coffee and cake.
"Wonderful coffee," Clarice said. "Call me Clarice. Now, about the Garden Club, and the morning coffee hours . . . We go to Marge on Thursday, and Edna Mondays, and Thelma Tuesday afternoons, and . . ." She bit into the proffered piece of cake. "And . . ." she said, turning the morsel over and over in her mouth.
"And . . ." Norma said hopefully.
"And . . ." Mrs. Brainerd said, looking slightly crosseyed down her nose, as if she were trying to see what was in her mouth. "This cake," she said. "This cake "
"Marvel Mix," Norma said with elan. "No greasy feel . . ."
"I'm sorry," Mrs. Brainerd said, getting up.
"You're-what?"
"Sorry," Mrs. Brainerd said, with genuine regret. "It's your cake."
"What about my cake?"
"Why, it's got that greasy feel."
"You-I-it-but the commercial promised . . ." Norma was on her feet now, moving automatically. "The cake is so good, and my house is so beautiful ." She was in between Mrs. Brainerd and the door now, heading her off in the front hall.
"Sorry," Mrs. Brainerd said. "I won't be seeing you. Now, if you'll just close that closet door, so I can get by . . ."
"Close the door?" Norma's eyes were glazed. "I can't. I have to get something off the closet shelf."
"It doesn't matter what you get," Mrs. Brainerd said. "I can't come back. We ladies have so much to do, we don't have time . . ."
"Time," Norma said, getting what she wanted from the shelf.
"Time," Mrs. Brainerd said condescendingly. "Oh. Maybe you'd better not call me Clarice." "Okay, Clarice," Norma said,
and she let Mrs. Brainerd have it with the lavender machine.

First she propped Mrs. Brainerd up in a corner, where she would be uncomfortable. Then she reversed the nozzle action and brought Polly Ann and Puff and Ambrose back to mobility. Then she brought her box of sewing scraps and all the garbage from the kitchen, and began spreading the mess around Mrs. Brainerd's feet and she let Puff rub cat hairs on the furniture and she sent Polly Ann into the back yard for some mud. Ambrose, released, Did It. at Mrs. Brainerd's feet.
"So glad you could come, Clarice," Norma said, gratified by the look of horror in Mrs. Brainerd's trapped and frozen face. Then, turning to Polly Ann's laden pinafore, she reached for a handful of mud.

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From his home on a flowery street leading straight down hill to the Pacific Ocean, G. C. Edmondson sends us another story of the adventures he and his Mad Friend enjoy-if that is the proper word -in the United Mexican States. And considers certain problems in the realms of cosmogony, topography, and other things. The barge used in preliminary drilling for Project Mohole [he writes] was named CUSS I. I feel my nomenclature is more appropriate.

## THE THIRD BUBBLE

## by G. C. Edmondson

The young man wore a white shirt opened nearly to his navel and tight black trousers. With the disdainful deliberation of a matador he aimed the blunt end of an ax. The turtle ceased moving and faced the end with a stoicism marred only by a hissing sigh and large oily tears.

The ax crunched like a claw hammer hitting a ripe cantaloupe. Flippers thrilled. "The life is in the head," a policeman standing next to me said, somewhat unnecessarily, I thought.
"Or occasionally in the gonads," my mad friend added sotto voce and in English.

With an effortless flourish the young man cut around the bottom shell and lifted it to disclose an interesting array of innards
and seven assorted hearts, all still beating. A semicylindrical swipe removed head and neck. Two slashes removed front flippers. The young man's white shirt remained immaculate despite the welter of blood.

I wondered at his flamboyance until I saw her. She was about seventeen, with long hair which would have looked more natural north of a southbound palomino. She wore a white blouse like the turtle butcher's save that hers bulged more attractively. Her capris fit like epidermis burnished with stove blacking. She was witnessing the rite with none of those minuscule shrieks and head turnings which Anglosaxon females employ to disguise their taste for blood.

Another magnificent slash and the turtle butcher lifted legs and tail. A shred of flesh held. He twisted. A sizeable sac of body fluids wrung out and wrought posthumous vengeance on his white shirt, face, and most of his trousers.
"Ay ay ayl" the palomino exclaimed between giggles.

My mad friend raised an eyebrow. "Pocha," I muttered. My judgment was vindicated when she spoke Californian Spanish to her progenitors.

Utterly crushed, the matador of sea turtles sloshed himself with clean water. He finished butchering silently, without flourishes.
"He jests at scars who never felt a wound," my friend quoted. I sighed and we trudged on through soft sand. The humidity approached turkish bath proportions. "What ever induced you to come to this Latin Limbo before we got the magazine launched?" my friend asked.
"The Mohorovicic Discontinuity achieves a record thinness some miles due W of here."

My friend gazed at breaking surf and as we passed a cross where some fisherman had washed ashore he crossed himself. "How do you hold still long enough to drill a hole?"
"Four engines," I explained, "Propellors pointing in different directions. One man sits before a radarscope pushing buttons.
"My feet," I groaned, "How much farther?"

My mad friend hailed a capitalist with two burros.

Built since the last hurricane, our hotel already showed signs of decay. Holes in its palm frond walls admitted mosquitoes, bats, and small pterodactyls. I glanced at the newspaper on a table across from the bar. It was in Spanish and its front page was filled with poorly reproduced pictures and misspelled names of the astronauts in the Russ-American two-weeks-in-orbit shot. "Outer space!" I groused, "When'll we get enough money for some work on Inner Space?"

My mad friend shrugged.
"You should be on my side. The seas'll fill more stomachs and save more souls than all that hardware. How long d'you think this Bruderschaft's going to last before the comrades go off on a new kick anyhow?"
"I didn't vote for him," my friend said.

The barman was frantically sloshing booze into a row of glasses. His assistant struggled to extricate himself from a bulletheaded football type who was telling a story in some language the assistant didn't know. He escaped and I saw he was the self-petarded turtle butcher.
"Café," my friend said, "And do you have some Noche Buena left from Christmas?"
"I shall see." The young man ducked the bulletheaded giant's embrace on his way into the back room. The giant began staggering in our direction.
"The End of a Perfect Day," my friend growled, but a pair of companions hastily steered the giant back to the bar. One was dressed in subtly ill-proportioned trousers and a flowered sport shirt with a vaguely muscovite look. The other athletic looking young man had splurged himself for some American clothes. "Off some iron curtain freighter," my friend hazarded.

I heard occasional vowels, each within a fortification of high explosive consonants. "Couldn't be," I said, "No ships in except my tender."

The turtle butcher brought bituminous coffee and a bottle with a bright poinsettia label. "Real beer!" I marvelled. My mad friend smiled wistfully. "They only make it once a year," he said.

Two rather attractive latin women stood in the doorway. The sun made it apparent that they wore no slips. They removed wraparound skirts to reveal bermudas and the athletic types at the bar lost interest.
"That wasn't exactly cricket," my mad friend said as they collapsed at our table. "If they don't like it," one replied, "Send a gunboat."
"Noche Buena!" the other
wife exclaimed, "Where did you get it this time of year?"
"Millinery secret," my friend grunted.
"Keeps it under his hat," I explained.
"Speaking of secrets," my friend continued, "Why aren't you still out on Blaspheme II?"
"After months of mud, silt, strata of this'n thata, we hit something hard. I brought the tender in to pick up some diamond drill heads."

Wives abruptly ceased discussing whether haystack hair went with the new botch look. "Did somebody say diamonds?"
"Too cheap to smuggle," I said, "And you'd look better with a string of carborundum around your neck."

There was sudden laughter at the bar. "That short one," a wife said, "Is a woman." My mad friend glanced at me and laughed.
"Que hubo?" a wife asked.
"Everybody was well into the third reel of Eisenstein the Terrible before I could sort the boys from the girls."

A shadow fell across the table. The entire band of bulletheads was smiling hopefully.
"Blow," my friend said pleasantly in English. "These ladies don't need any Cuban rubles."

They stared in mute Slavic incomprehension. The one in American clothes was opening his mouth when a small dark
man elbowed through and bared brilliant teeth in a coprophagous grin.
"I don't believe it," a wife said.
The Byzantine had a way of popping up just as we were getting comfortable. No one had ever learned more of his past than he cared to divulge. These usually conflicting stories centered about a time machine and his birthdate some 500 years in a nonexistent future. I had seen him once as mate on a seagoing ferry, once as a Mexican army officer, once as an alleged Secret Service man. "What," I asked, "Are you up to now?"

In archaic Sephardic Spanish he said, "I conduct a tour."

A bullethead winked at a wife. The wife withered him. My mad friend coughed into his handkerchief.
"You could pass for American," I told the withered one.

With drunken solemnity he said, "My primary allegiance, suh, is to the sovereign State of Texas."

What kind of travel agency would mix up a group like this?

The Byzantine bullied them into seats at the next table. After a wistful glance at the wives, they reverted to some plosive gabble where each sentence sounded like an ultimatum. The Byzantine wiped his face with a scented handkerchief before muscling a chair into our table. "Some wild cattle," he said, using the latin
term for streetwalkers, "Will drift in and keep them happy."

The turtle butcher deposited a half empty bottle. Over poorly drawn terriers was printed GENUINE SCOCH WISKY. The Byzantine gulped a gleason-sized belt. His eyes widened like a freshly alimonied Californian's, then he smiled again. "Poor children," he sighed, "They get restless in this climate."
"Why bring them to this third rate Fort Zinderneuf?"

Given half a chance, the Byzantine would never stop. "What," my friend hastily asked; "Will you accomplish with this Mohole?"
"Search me. My job is just keeping the radar going so we can center over the hole." I sipped beer and tried to answer his question. "We ought to break through any day. Maybe it'll tell us how the earth was created."
"It's all in Genesis," my mad friend said, and made a ritual gesture of exorcism.

Wives snatched bags from the table. Staring, the Byzantine overfilled his glass and was still pouring booze over the table. It wasn't like him to get potted this early in the story. "Is your liver giving out?" I asked.

There was a deafening silence at the next table. Bulletheads stared at the doorway where the late sun silhouetted an anatomical ensemble.
"Tiger, tiger burning bright," my mad friend muttered.
"Rascuachitlan has joined the 20th Century," I decided.
"How?" a wife inquired.
"Wild cattle who must face the magistrate without consul or counsel actually dare appear without skirts."

The silhouette was joined by two thicker ones. As they fumbled their sunblinded way across the floor I realized it was the palomino. The turtle butcher sidetracked his tray and rushed to escort them. Some instinct told me that the tight trousered palomino was communicating.

Bulletheads returned resignedly to their drinking, save one who gazed regretfully at what might have been. Even iron curtain countries issue dresses for female tourists. I wondered if this one had lost her luggage.
"Break through what?" my mad friend asked. I wrenched myself back to the Mohole.
"The mantle; Earth's outer covering."
"What do you expect to find?"
"No two geologists agree."
The Byzantine glared morosely into his glass. "Is not good scotch," he growled.
"Could you do an article on it for the new magazine?" my friend asked.

The Byzantine brightened. "I have a story," he said.
"We don't plan to run fiction."
"At least we won't call it that." "But this is true."
My mad friend said something in Arabic. The sound alone could have provoked another crusade.
"It starts with an astronaut just beginning turnover to go into orbit," the Byzantine persisted.
"At least it isn't sf," a wife said.
"Then just at the moment of subssitution-"
"The moment of what?"
"When the Great Ones pull him through the inspection hole and start the whirligig so radar will think he's orbiting."

My friend flagged frantically and the turtle butcher came to our table. Not, I noted, without a swift glance at the palomino. "This sheep dip," my friend said, "Is doing permanent damage to the small gentleman's cerebrum. Kindly bring something less noxious." He slopped the Byzantine's glass on the floor and tossed a match. There was a sputtering whoosh. "Won't even burn with a blue flame," my friend grunted.

The Byzantine screwed his boina down on his head. "The Great Ones," he said, "Are not too different. They're just waiting for us to catch up."
"I demand immediate integration," my mad friend murmured.
"Where do these Great Ones come from?" a wife asked.

The turtle butcher deposited a bottle. My mad friend studied the
seal and label. He passed it to me, looking exactly as someone might who had not hàd a drink since a soul shattering episode in Nord Afrique. I poured a short snort. "Legitimo; the leprechauns washed their feet in this poteen."

The Byzantine poured another gleason-sized belt. "Primoroso!" he exclaimed, "But why tastes Irish so different from scotch?"

While my mad friend explained how smoke is flued under the Irish floor and boils up through the rye in Scotland I studied the menu. It consisted of turtle. "Hungry?" I asked. My friend nodded.
"Cahuama!" a wife exclaimed, "It makes years that I do not taste."
"Is it fit for human consumption?" my friend asked.
"It has six flavors," the wife continued, "Part tastes like beef, some like veal, some like pork, some like chicken. Once during difficult times we made chorizo."

The palomino progenitor leaned toward me and in English said, "I know cahuama is turtle but could you tell me about it?" He shrugged apologetically and continued in California Spanish, "First time I've ever been here."
"This wife," I cautioned, "Grew up in an isolated fishing village. If you've been eating naught but fish it's possible that hawkbill sea turtle will taste like beef, lamb, chicken, or consumé
madrileno. If you've eaten these regularly, I'm afraid it's going to taste fishy. As for the chorizo, I prefer my sausage of dog or iguana."

The palomino was turning green.
"I still want some," a wife insisted.
"And you shall have some," my friend said, "But let's cut out where the rest of us can have something approved by Good Housekeeping and Leviticus."
"Dees gawhamma," a bullethead asked in what was probably English, "Ees tortull?"

I nodded.
They turned on the Byzantine with angry expostulations. My friend flagged the assistant bartender, pressed a wadded bill in his hand, and said, "We wish to eat elsewhere."
"I don't know my way," the palomino progenitor said, "Do you mind if we go along?"
"Why not?" As long as the bulletheads and the Byzantine had attached themselves
"In ten minutes," the turtle butcher said, "I finish."

We finished oụr drinks and, after endless waits before the door marked DAMAS, exited. Under bug-haloed streetlights waited three calandrias, the open carriages which handled most of the local transportation problem.
"Courage," I consoled, "The horses look tired."

The turtle butcher had shed his apron and combed his hair. He maneuvered the old folks into a calandria and crowded next to the palomino. My mad friend and I made room for the Byzantine. "After the astronaut has been pulled through the hole," he said, "We. flashback and explain about the Great Ones."
"Vamonoooooooos!" the turtle butcher shouted in imitation of a train conductor. Drivers flicked whips and whistled between their teeth. We passed to an older part of town. Open air restaurants sweltered astraddle the cobbled street's central gutter. "La zona," our hackman said.
"Did he say Zona?" a wife asked.
"Zona de Tolerancia," the turtle butcher explained.

My friend and I looked at each other in growing consternation. "Wrong appetite," my friend muttered.
"What's wrong?" the palomino progenitor twittered.
"We are enfiladed by whorehouses," I grunted.
"No importa," the turtle butcher said, "Excellent restaurants. Families come."

The palomino abruptly stooped. "Eight to five," my mad friend murmured. She straightened again and though strained, the capris had not burst. From the gutter she held a small neatly wrapped package.

A policeman strolled down the street, gravely acknowledging greetings from the open doorways. "Everything managed with decorum," my friend said. "T'was indeed a sad day when the Parlor House disappeared from the Land of the Free and the Home of the Women's Club.
"So." He turned to the turtle butcher. "Which eating establishment gives you a kickback or just happens to belong to your uncle?"

The young man led us through a heavy door into the patio of a large building with heavy windowless walls to shut out the noisome stinks of the Great World. Its two stories gave onto a cool central patio where an ancient woman fussed over washtub sized copper cauldrons. A small grizzled man in loose white trousers and guayabera was digging. His spade liberated a jet of steam. My friend absently hummed a snatch of Te Deum.
"The young man deserves his commission," I said.
"And a lifetime indulgence," my mad friend added.

We were served, one recalcitrant wife with cahuama, the rest of us with beef just emerging from its banana leaf shroud after forty-eight hours underground. "Real barbacoa," my friend exulted.

I wrapped beef in a hot tortilla, pausing only to slosh it with
red-green sauce made of tiny magma-flavored chiles serranos macerated with onion, jitomate, oregano, and fresh coriander leaves. "True barbacoa," I agreed, "Not that fraudulent pap from the backyard brazier which ulcerates our vincible homeland."

The bulletheads performed heroic sleight of mouth. The ubiquitous small boys trotted beer and iced glasses of instant insanity from across the street. "After the Great Ones pull the astronaut through the hole," the By zantine continued, "They indoctrinate him into the nature of the universe."

A wife stared morosely at turtle stew. "This tastes like fish," she complained. While my mad friend and I laughed a boy removed her plate and brought barbacoa.
"You will like this story," the Byzantine told us.
"Like a strawberry pizza," I said, but he was continuing.
"In this story we prove that space travel is impossible. After all, space is solid!"

My mad friend grinned. "Now I know why the Index bans Galileo."
"But what, then, is Earth?"
"A bubble in the gently flowing solid of space."
"And the Great Ones?" I asked, "Where do they live?"
"On other spheres."
"Don't you mean in?"
"On," he insisted, "Earth is a sphere inside a sphere. We live on outer surface of inner sphere. How else could we see stars?"
"How indeed?" my mad friend wondered.

The mortal gorge was ending. The old woman brought a fleeting memory of Act I, Scene 1, MacBeth as she ladled up coffee and the inevitable final course of beans from her cauldrons.

The palomino rummaged in her purse and discovered the green wrapped package. Que sera?" she wondered.

It looked like sheets of unseparated banknotes. Then I realized they were lottery tickets, perforated to tear each into its hundred separately saleable cachos.
"What date?" I asked. She handed me a sheet. "Last week. Winners ought to be posted by now."

The progenitor was recalling stories of 8 million peso winners. "How do you cash them?" he sputtered. "Help me and you'll get a split. Everybody gets a split!" Across the patio the ancient man and woman regarded us.

The palomino progenitor made a magnificent gesture and said "This is on me." He handed the old woman a note whose denomination precluded any hope of change and grandiloquently told her to keep it. I wondered how much would revert to the turtle butcher.

That young man reappeared with more calandrias. It was ten PM. Offices and stores had just closed and the local people were hurrying home to supper. I wondered how much of a dent we had made in what the inhabitants of this pension were going to get.

Momma sat beside the palomino. Her husband shouted back to us regarding the division of spoils. "Why not wait and see if the tickets won?" my mad friend shouted back.
"If space is solid why don't we fall up?" I asked.

The Byzantine leaned forward with sudden intensity and I saw he was not as drunk as I'd thought. "A planet is a one way screen. Gravity is the relentless seep of space pushing in."

The calandria lurched over a missing cobble. My friend cast a jaundiced eye at the moon's direction and said, "We progress from Penn Station to the Battery via Brooklyn."
"Oh, give the poor boy a chance," a wife said.

In the lead carriage the turtle butcher's dyspeptic grimaces were soulful.
"If gravity seeps in," I said, "The bubble will get full."
"It's been happening since the Ur-bubble burst to create an expanding universe. Have you noted the circular bubble sign in primitive religions, erroneously called the sun disc?"
"A yarn like that would sure as Kennedy put me on the Index Librorum Prohibitorum. What time's your boat leaving?" my friend asked with his usual mercurial change of subject.
" 8 AM."
He glanced at his watch. "How much farther to that miserable hotel?"

The turtle butcher's soulful looks made me wonder if he was passing a stone. "We expect to hit the Discontinuity any minute," I said. "Maybe I can get away from this Turkish bath soon." I slashed at the gnats which descended each time we passed a street light.
"Mira alli!" a wife exclaimed. Walls were draped with numbers printed on muslin. "Alto!" I yelled. We scrambled into the lottery office. The Byzantine made explosive noises and his bulletheads stood quiet. "How long are you stuck with them?" I asked.
"Thirteen more days but our plans may change. Would you care to join the tour?"
"Afraid not. I've got work to do."
"Where're you going?" my friend asked.

The Byzantine got that glassy look again and I suddenly noticed a hearing aid. He had once told me he expected to die at 40 . He must be around 42 now. His eyes focussed and he put his hand on my arm. "En serio, I have a fondness for you. I will happily bear
the expense.for you and wives."
Bulletheads crowded around, arguing like poorly carburated Vespas. "Right proud t'have y'all come along," said one. The one a wife had insisted was female edged closer. "Danger if you not," she added. "We needing badly women."

My mad friend had been watching the gambling crazed palominos. "Those tickets are complete?" he asked, "Nothing torn off?" They nodded. "If the stubs weren't handed in for the drawing your discarded, unsold tickets are about as valuable as a Nixon button," my friend said.

Seeing his bubble burst, the progenitor tried to laugh but looked more as if his ulcer had just gone septic. He was remembering his 'this is all on me'. As horses clopped toward our hotel even the turtle butcher sensed that the evening's magic had departed.
"These Great Ones," I asked, "Why such a hurry to pull the astronaut through the hole? Do they have to close it quick to keep from leaking gravity?"

The Byzantine had lost interest in his own story. "How do they get from one planet to another if it can't be done with spaceships?" I insisted. He came to with a jerk and I wondered if he were drunk or tired. "Time machine," he said, "That's how I met the Great Ones."

Back in first person, I noted. "In an expanding universe," the little man continued, "The only way to travel is to go back to that instant when the Ur-bubble has just burst and step to one's chosen destination. It's easy to move forward again in time."
"A good idea for a story," my mad friend said thoughtfully. "Too bad I can't use it."
"Too late," the Byzantine said, and went to sleep. Moments later we arrived and as the turtle butcher watched his palomino depart I knew somebody else's bubble had burst. The floor was crowded now and an orchestra industriously ground out a mambo while the locals, a tourist or two, and the wild cattle twisted. As we crossed the floor someone released a mass of balloons. Dancing turned to bedlam as hairpins and cigarettes popped them. The By zantine caught my arm. "You will come?" he pleaded.
"Sorry." I felt sudden shame when the little man I had always regarded as a figure of fun shook my hand and spun so abruptly that I could see tears fly. A balloon rocketed across the floor and slapped me wetly in the face.

The wives had put up their hair and gone to bed. I sat on the balcony watching the moon sink into the sea just about where Blaspheme II was tethered to its column of drill steel. My mad
friend silently passed a rosary through his fingers. "Too bad about the lottery tickets," he finally said.
"Did you notice how the Byzantine lost interest right in the middle of his story?"

My friend nodded. "Wasn't drinking much either. I wonder if he's on the needle. Notice that glassy stare and the way he was Hearing Voices?"
"Be funny if that hearing aid was a radio. I wonder what instructions the Great Ones would give him."

Beneath our balcony the bulletheads erupted with packed bags. They trotted toward the ocean for a farewell swim. "Two out of three will step on stingrays," my mad friend guaranteed. But there was only laughter as they splashed into the quietly lapping ocean.

I had a sudden thought. "Could we find that paper that was on the table this afternoon?" My friend made an interrogatory grunt. "The pictures," I said, "They look like that mixed bag of astronauts."

My mad friend snorted and began thumbing his rosary.
"This'd sure be the place to hole up if somebody wanted to
pretend he was in orbit."
"Oh, for Christ's sake!" my friend snapped, "Give up sf for a while. Try knitting, or smoking pot. Besides, the Great Ones pull them up through the hole."
"Right," I grunted.
"I'm bushed," my mad friend said. "In case you sail before I get up, I'll be here another week. Think you'll break through by then?"
"Could be," I said.
"Well, good night. Don't forget the article." He disappeared and I sat watching the bulletheads come out of the sea. Still in bathing gear, they set off with their bags. Why had that female thought it dangerous if we didn't go?

And why didn't the Byzantine want to peddle his crazy theory any more? The palomino progenitor had lost something he never really had. So had the turtle butcher. But what bubble had burst for the Byzantine? I yawned and gazed at the gibbous moon through half closed eyes. What were they celebrating downstairs popping all those balloons? "To hell with it," I decided. The night was half gone and tomorrow I'd be out on that barge again.

Drilling the Mohole.
$\therefore$ After impressing upon our ace agent, Mr. Pettifogle (recently returned from taking the Keely Cure) that his name was "not pronounced 'Simmends' but 'Sigh-monds,' ${ }^{\text {© }}$ Mr. Bruce Simonds proceeded to impress him further with the following data: "I stand $5^{\prime} 7 \mathrm{~m}^{\prime \prime \prime}$ in my athlete's feet, weigh 140 lbs after a haircut, measure 37-29-33, can do 41 very good push-ups, put the shot $43^{\prime} 2^{\prime \prime}$, run 50-yard dash in 6.5 , the hundred in 12.5, the 660 in less than two minutes, the mile in 6:32, and belong to the schoop's scholarship society." Dazed by these statistics Pettifogle inquired the age of our most recent Los Alamitos (Cal.) contributor. "Fourteen," said Mr. S.-adding, "I am pedantic, stingy, cowardly, lazy, leering, surly, despicable, dishonest, wretched, miserable, and dolichephalic. Also quite modest." Delivering his report on the author of this funny poem about a robot mfgr., Pettifogle scribbled on the bottom in a shaky hand the Future of America is safe in the keeping of such Youths as this, and stepped out for a Chumley Martini (see below for formula).

## THE SEARCH

## by Bruce Simonds

The first robots were pretty shoddy
Back in the Seventies.
They were uncoordinated and clumsy
And they thought too slowly
And they didn't understand more than a few simple words
And they would wash a dish to a powder
If you didn't stop them in time.
So in August of 1978
Arthur Chumley called in the Product Development Group
Of Chumley Robot
And in they came
With the latest model.

It clanked over to Arthur Chumley
And said
"Hello (klik) Mister (klik) Chumley (klik)."
And put out its hand.
But before Arthur Chumley could shake the hand
It had knocked over a gilded bust of him
Badly denting the halo.
"This is not good,"
Said Arthur Chumley.
"We must think, we must draw, we must work
"To build the More Perfect Robot.
"Build me a robot
"That does everything our present model does
"But has none of its clumsy, uncoordinated movements.
"And while you're at it
"Knock its weight down to two hundred kilos."
And he chased them all out of his office
And he looked at the sales graph
And he poured himself a bourbon-and-water.
Easy on the water.
A year and two months later
In October of 1979
The Product Development Group marched in proudly
With their robot.
It walked smoothly and gracefully over to Arthur Chumley And said
"Hello (klik) Mister (klik) Chumley (klik)."
And held out its hand
Which Arthur Chumley shook.
"Make me a Chumley Martini,"
Said Arthur Chumley.
But the robot did not make him a Chumley Martini.
Instead, it said
"(Whir) (buzz) (klik) (whir) (klik) (buzz) (paf!)"
And blew a $\$ 4.79$ pentode tube
Signifying Arthur Chumley had said something beyond its grasp.
Whereupon Arthur Chumley leaned back
And folded his pudgy hands over the convenient ledge
Made by his stomach
And said

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*This is not good.
"We must think, we must draw, we must work
"To build the More Perfect Robot.
"Build me a robot
"That does everything our present model does
"And has a complete working vocabulary
"To fit its particular function.
"And while you're at it
"Get rid of that damn (klik) it makes switching tapes."
And he chased them all out of his office
And he looked at the sales graph
And he made himself a Chumley Martini:
Three ounces of gin in a cocktail glass
And smile at the portrait of Martini \& Rossi.
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Six years and six months later
In April of 1986
The Product Development Group Trooped in
With their robot.
It walked over to Arthur Chumley
And said
"Good morning, Mister Chumley."
And Arthur Chumley turned to the Product Development Group
And said
"Do you know what's going to happen if we market this thing?" And the Group members all quivered
And shook their heads
And the robot said it did not.
"I'll tell you what's going to happen if we market this thing,"
Said Arthur Chumley.
"The entire American public is going to laugh at us
"If we market this thing.
"And do you know why?"
And the Group members all quivered
And shook their heads
And the robot said it did not.
"I'll tell you why.
"Because they have a right to laugh at a company
"That markets a robot
"That says 'Good morning' at four-thirty in the afternoon."
Said Arthur Chumley.

## And he sat down at his desk

And put his head in his hands
And said
"This is not good.
"We must think, we must draw, we must work
"To build the More Perfect Robot.
"Build me a robot
"That does everything our present model does
"And can see
"And smell
"And hear
"And taste
"And feel.
"And while you're at it
"Cover it with a soft, fleshlike substance
"So it looks like a human being.
"And just for the hell of it
"Give it the ability to perceive a person's emotional state
"From his actions
"And know how to act accordingly."
And he had a vice-president throw them all out of his office And he looked at the sales graph
And he went to the liver bank.
Twenty-two years and eleven months later
In March of 1999
The Product Development Group snivelled in
With their robot.
It seated the Group Chairman
Remarking about how cold it had been last night.
Then it walked over to Arthur Chumley
And held out its soft, fleshlike hand
Which Arthur Chumley ignored.
Somewhat disconcerted
The robot said
"How are you, Mister Chumley?"
Whereupon Arthur Chumley replied
"Miserable. My wife had an affair with my best friend
And my servants have run off with my plane
And all my clothes."
And the robot smiled

And said
"You're joking, Mister Chumley."
And Arthur Chumley leaned forward
And said
: "You're right. I'm joking."
And Arthur Chumley turned to the Product Development Group
And said
"I am proud of you.
"I gave you a very difficult task:
"To build the More Perfect Robot.
"But you did it.
"And now I will give you an even more difficult task:
"To build The Perfect Robot.
"Build me a robot that is a companion.
"Build me a robot that is a friend.
"Build me a robot that can feel emotion
"And can pass for human
"And that, gentlemen, will be The Perfect Robot."
And he dismissed them from his office
And he looked at the sales graph
And he smiled
For he knew that in a few years
The Group would present him with The Perfect Robot.
And they did
Early in the May of 2039.
Seven years and six months after that
In December of 2046
The people from Beta Centaurus IV came.
They didn't invade
They just came
And they're our very best friends now.
They were interested in our technology
And one day
Arthur Chumley was talking to one of them in his office.
They picked up the language rather quickly.
He was telling it
About the time
And money
And effort they had expended
To build a robot
That had smooth, agile movements

And weighed only two hundred kilos
And had a complete working vocabulary
To fit its particular function
And made no damn (klik) switching tapes
And could see
And smell
And hear
And taste
And feel
And was covered with a soft, fleshlike substance
And could perceive a person's emotional state
And act accordingly
And was a companion and a friend
And could feel emotion
And could pass for human.
Whereupon the Centaurian said
"He can't do much of anything you can't do.
"Why not just hire people to do the same things?"
And Arthur Chumley chuckled
And leaned back
And opened his mouth
To tell the Centaurian why not.
And then he closed his mouth
And excused himself
And went downstairs
And hailed a cab
And went home
And dashed off a few notes to his wife and broker
And packed four suitcases with stocks and bonds and money
And closed out all his bank accounts
And went to the spaceport
And chartered a small ship
And disappeared.
Not much is heard from Arthur Chumley these days.
This is because
He is running an opium farm
In New Brasilia
On Mars.
His buyers come every eight months
For their shiploads of opium

And nothing is said
About Arthur Chumley's strange refusal to use robots
For it is known that he is somewhat eccentric.
He hires men to work the fields
Aind they do.
And Arthur Chumley sells
And the buyers buy
And nothing is said.

## THE THING FROM OUTER SPACE AND THE PRAIRIE DOGS



## by Gahan Wilson

Rocket ship landed on the Texas Panhandle, one bright, sunny day, in the middle of a prairie dog colony. The top of the rocket unscrewed, with a harsh, grating noise, and out crawled a Thing from outer space. The Thing carried a death ray, a mind twister, a pain amplifier, and many other ingenious instruments of war, torture, and destruction. It drooled green drool and looked about for something to kill.

When a prairie dog peeped out from its burrow, the Thing spun on its tentacles, and shot out a blinding beam of fire from one of its weapons which reduced the prairie dog to a cloud of idly drifting ash. The Thing burbled for joy and started hunting eagerly for more of the tiny creatures.

At this point, two cleverly concealed trap doors opened in the ground, and from each of them rose a glittering, electronic cannon manned by a crew of uniformed prairie dogs. The cannons fired simultaneously on the Thing and destroyed it.
"It's a good thing we were prepared," said the Captain of the prairie dogs, "But I could have sworn the humans would have launched the first attack."
Moral: Watch out which fly you swat.

## SCIENCE

## (3)

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## THE HEAVENLY ZOO

## by Isaac Asimov

Last summer (july 20, 1963, to be exact) there was a total eclipse of the Sun, visible in parts of Maine, but not quite visible in its total aspect from my house. In order to see the total eclipse, I would have had to drive two hundred miles, take a chance on clouds, then drive back two hundred miles, braving the traffic congestion produced by thousands of other New Englanders getting this same notion.

I decided not to (as it happened, clouds interfered with seeing, so it was just as well) and caught fugitive glimpses of an eclipse that was only 95 percent total, from my backyard. However, the difference between a 95 percent eclipse and a 100 percent eclipse is the difference between a notion of water and an ocean of water, so I did not feel very overwhelmed by what I saw.

What makes a total eclipse so remarkable is the sheer astronomical accident that the Moon fits so snugly over the Sun. The Moon is just large enough to cover the Sun completely (at times) so that a temporary night falls and the stars spring out. And it is just small enough so that during the Sun's obscuration, the corona, especially the brighter parts near the body of the Sun, is completely visible.

The apparent size of the Sun and Moon depends upon both their actual size and their distance from us. The diameter of the Moon is 2,160 miles while that of the Sun is 864,000 miles. The ratio of the diameter of the Sun to that of the Moon is $864,000 / 2,160$ or 400 . In other words, if both were at the same distance from us, the Sun would appear to be 400 times as broad as the Moon.

However, the Sun is further away from us than the Moon is, and therefore appears smaller for its size than the Moon does. At great dis-
tances, such as those which characterize the Moon and the Sun, doubling the distance halves the apparent diameter. Remembering that, consider that the average distance of the Moon from us is 238,000 miles while that of the Sun is $93,000,000$ miles. The ratio of the distance of the Sun to that of the Moon is $93,000,000 / 238,000$ or 390. The Sun's apparent diameter is cut down in proportion.

In other words, the two effects just about cancel. The Sun's greater distance makes up for its greater size and the result is that the Moon and the Sun appear to be equal in size. The apparent angular diameter of the Sun averages 32 minutes of arc, while that of the Moon averages 31 minutes of arc.*

These are average values because both Moon and Earth possess elliptical orbits. The Moon is closer to the Earth (and therefore appears larger) at some times than at others, while the Earth is closer to the Sun (which therefore appears larger) at some times than at others. This variation in apparent diameter is only 3 percent for the Sun and about 5 percent for the Moon so that it goes unnoticed by the casual observer.

There is no astronomical reason why Moon and Sun should fit so well. It is the sheerest of coincidence, and only the Earth among all the planets is blessed in this fashion. Indeed, if it is true, as astronomers suspect, that the Moon's distance from the Earth is gradually increasing as a result of tidal friction, then this excellent fit even here on Earth is only true of our own geologic era. The Moon was too large for an ideal total eclipse in the far past and will be too small for any total eclipse at all in the far future.

Of course, there is a price to pay for this excellent fit. The fact that the Moon and Sun are roughly equal in apparent diameter, means that the conical shadow of the Moon comes to a vanishing point near the Earth's surface. If the two bodies were exactly equal in apparent size, the shadow would come to a pointed end exactly at the Earth's surface, and the eclipse would be total for only an instant of time. In other words, as the Moon covered the last sliver of Sun (and kept on moving, of course) the first sliver of Sun would begin to appear on the other side.

Under the most favorable conditions, when the Moon is as close as possible (and therefore as apparently large as possible) while the Sun is as far as possible (and therefore as apparently small as possible), the Moon's shadow comes to a point well below Earth's surface and we pass through a measurable thickness of that shadow. In other words, after the

[^0]unusually large Moon covers the last sliver of the unusually small Sun, it continues to move for a short interval of time before it ceases to overlap the Sun and allows the first sliver of it to appear at the other side. An eclipse, under the most favorable conditions, can be $71 / 2$ minutes long.

On the other hand, if the Moon is smaller than average in appearance, and the Sun larger, the Moon's shadow will fall short of the Earth's surface altogether. In other words, the small Moon will not completely cover the larger Sun, even when both are centered in the sky. Instead, a thin ring of Sun will appear all around the Moon. This is an "annular eclipse" (from a Latin word for "ring"). Since the Moon's apparent diameter averages somewhat less than the Sun's, annular eclipses are a bit more likely than total eclipses.

This situation scarcely allows astronomers (and ordinary beautyloving mortals, too) to get a good look, especially since a total eclipse of the Sun not only lasts for a few minutes at best, but can be seen only over that small portion of the Earth's surface which is intersected by the narrow shadow of the Moon.

To make matters worse, we don't even get as many eclipses as we might. An eclipse of the Sun occurs whenever the Moon gets between ourselves and the Sun. But that happens at every new Moon; in fact the Moon is "new" because it is between us and the Sun so that it is the opposite side (the one we don't see) that is sunlit, and we only get, at best, the sight of a very thin crescent sliver of light at one edge of the moon. Well, since there are twelve new Moons each year (sometimes thirteen) we ought to see twelve eclipses of the Sun each year, and sometimes thirteen. No?

No! At best we see five eclipses of the Sun each year (all at widely separated portions of the Earth's surface, of course) and sometimes as few as two. What happens the rest of the time? Let's see.

The Earth's orbit about the Sun is all in one plane. That is, you can draw an absolutely flat sheet through the entire orbit. The Sun itself will be located in this plane as well. (This is no coincidence. The law of gravity makes it necessary.)

If we imagine this plane of the Earth's orbit carried out infinitely to the stars, we, standing on the Earth's surface, will see that plane cutting the celestial sphere into two equal halves. The line of intersection will form a "great circle" about the sky, and this line is called the "ecliptic."

Of course, it is an imaginary line and not visible to the eye. Nevertheless, it can be located if we use the Sun as a marker. Since the plane
of the Earth's orbit passes through the Sun, we are sighting along the plane, when we look at the Sun. The Sun's position in the sky always falls upon the line of the ecliptic. Therefore, in order to mark out the ecliptic against the starry background, we need only follow the apparent path of the Sun through the sky. (I am referring now not to the daily path from east to west, which is the reflection of Earth's rotation; but rather the path of the Sun from west to east against the starry background, which is the reflection of the Earth's revolution about the Sun.)

Of course, when the Sun is in the sky, the stars are not visible, being blanked out by the scattered sunlight that turns the sky blue. How then can the position of the Sun among the stars be made out?

Well, since the Sun travels among the stars, the half of the sky which is invisible by day and the half which is visible by night shifts a bit from day to day and from night to night. By watching the night-skies throughout the year, the stars can be mapped throughout the entire circuit of the ecliptic. It then becomes possible to calculate the position of the Sun against the stars on each particular day, since there is always just one position that will account for the exact appearance of the night sky on any particular night.

If you prepare a celestial sphere, then; that is, a globe with the stars marked out upon it; you can draw an accurate great circle upon it representing the Sun's path. The time it takes the Sun to make one complete trip about the ecliptic (in appearance) is about $3651 / 4$ days and it is this which defines the "year."

The Moon travels about the Earth in an ellipse and there is a plane that can be drawn to include its entire orbit; this plane passing through the Earth itself. When we look at the Moon, we are sighting along this plane, and the Moon marks out the intersection of this plane with the starry background. The stars may be seen even when the Moon is in the sky, so that marking out the Moon's path (also a great circle) is far easier than marking out the Sun's. The time it takes the Moon to make one complete trip about its path, about 28 days, defines the "sidereal month." (See ROUND AND ROUND AND-, F \& SF, January 1964.)

Now if the plane of the Moon's orbit about the Earth coincided with the plane of the Earth's orbit about the Sun, both Moon and Sun would mark out the same circular line against the stars. The Moon would catch up with the Sun periodically. The Moon would make a complete circuit of the ecliptic in 28 days, then spend an additional day and a half catching up to the Sun, which had also been moving (though much more slowly) in the interval. Every $291 / 2$ days there would be a new Moon and an eclipse of the Sun.

Furthermore, once every $291 / 2$ days, there would be a full Moon, when the Moon was precisely on the opposite side of us as the Sun was so that we would see its entire visible hemisphere lit by the Sun. Only at that time, the Moon should pass into the Earth's shadow and then there would be a total eclipse of the Moon.

Unfortunately, this does not happen every $291 / 2$ days because the plane of the Moon's orbit about the Earth does not coincide with the plane of the Earth's orbit about the Sun. The two planes make an angle of $5^{\circ} 8^{\prime}$ (or 308 minutes of arc). The two great circles, if marked out on a celestial sphere, would be set off from each other at a slight slant. They would cross at two points, diametrically opposed, and would be separated by a maximum amount exactly half-way between the crossing point. (The crossing-points are called "nodes", a Latin word meaning "knots.")

If you have trouble visualizing this, the best thing to do is get a basketball and two rubber bands and try a few experiments. If you form a great circle of each rubber band (one that divides the globe into two equal halves) and make them non-coincident, you will see that they cross each other in the manner I have described.

At the points of maximum separation of the Moon's path from the ecliptic, the angular distance between them is 308 minutes of arc. This is a distance equal to roughly ten times the apparent diameter of either the Sun or the Moon. This means that if the Moon happens to overtake the Sun at a point of maximum separation, there will be enough space between them to fit in nine circles in a row, each the apparent size of Moon or Sun.

In most cases, then, the Moon, in overtaking the Sun, will pass above it or below it with plenty of room to spare, and there will be no eclipse.

Of course, if the Moon happens to overtake the Sun at a point near one of the two nodes, then the Moon does get into the way of the Sun and an eclipse takes place. This only happens, as I said, from two to five times a year. If the motions of the Sun and Moon are adequately analyzed mathematically, then it becomes easy to predict when such meetings will take place in the future, and when they have taken place in the past, and exactly from what parts of the Earth's surface the eclipse will be visible.

Thus, Herodotus tells us that the Ionian philosopher, Thales, predicted an eclipse that came just in time to stop a battle between the Lydians and the Medians. (With such a sign of divine displeasure, there was no use going on with the war.) The battle took place in Asia Minor sometime after 600 в.с., and astronomical calculations show that a to-
tal eclipse of the Sun was visible from Asia Minor on May 28, 585 в.c. This star-crossed battle, therefore, is the earliest event in history which can be dated to the exact day.

The ecliptic served early mankind another purpose besides acting as a site for eclipses. It was an eternal calendar, inscribed in the sky.

The earliest calendars were based on the circuits of the Moon, for as the Moon moves about the sky, it goes through very pronounced phase changes that even the most casual observer can't help but notice. The 291/2 days it takes to go from new Moon to new Moon is the "synodic month" (see ROUND AND ROUND AND一).

The trouble with this system is that in the countries civilized enough to have a calendar, there are important periodic phenomena (the flooding of the Nile, for instance, or the coming of seasonal rains, or seasonal cold) that do not fit in well with the synodic month. There weren't a whole number of months from Nile flood to Nile flood. The average interval was somewhere between twelve and thirteen months.

In Egypt it came to be noticed that the average intervals between the floods coincided with one complete Sun-circuit (the year). The result was that calendars came to consist of years subdivided into months. In Babylonia and, by dint of copying, among the Greeks and Jews, the months were tied firmly to the Moon, so that the year was made up sometimes of 12 months and sometimes of 13 months in a complicated pattern that repeated itself every 19 years. This served to keep the years in line with the seasons and the months in line with the phases of the Moon. However, it meant that individual years were of different lengths.

The Egyptians and, by dint of copying, the Romans and ourselves, abandoned the Moon and made each year equal in length, and each with 12 slightly long months. The "calendar month" averaged $301 / 2$ days long in place of the $291 / 2$ days of the synodic month. This meant the months fell out of line with the phases of the Moon, but mankind survived that.

The progress of the Sun along the ecliptic marked off the calendar and since the year (one complete circuit) was divided into 12 months, it seemed natural to divide the ecliptic into $\mathbf{1 2}$ sections. The Sun would travel through one section in one month, through the section to the east the next month, the section next to the east the third month and so on. After 12 months, it would come back to the first section.

Each section of the ecliptic has its own pattern of stars and to identify one section from another, it is the most natural thing in the world to use those patterns. If one section has four stars in a roughly square
configuration, it might be called "the square"; another section might be the "V-shape", another the "large triangle" and so on.

Unfortunately, most people don't have my neat, geometrical way of thinking and they tend to see complex figures, rather than simple, clean shapes. A group of stars arranged in a V might suggest the head and horns of a bull, for instance. The Babylonians worked up such imaginative patterns for each section of the ecliptic and the Greeks borrowed these, giving each a Greek name. The Romans borrowed the list next, giving them Latin names, and passing them on to us.

The following is the list, with each name in Latin and in English: 1) Aries, the Ram; 2) Taurus, the Bull; 3) Gemini, the Twins) 4) Cancer, the Crab; 5) Leo, the Lion; 6) Virgo, the Virgin; 7) Libra, the Scales; 8) Scorpio, the Scorpion; 9) Sagittarius, the Archer; 10) Capricornus, the Goat; 11) Aquarius, the Water-Carrier; 12) Pisces, the Fishes.

As you see, seven of the constellations represent animals. An eighth, Sagittarius, is usually drawn as a centaur, which may be considered an animal, I suppose. Then, if we remember that human beings are part of the animal kingdom, the only strictly non-animal constellation is Libra. The Greeks consequently called this band of constellations "o zodiakos kyklos" or "the circle of little animals" and this has come down to us as the Zodiac.

In fact, in the sky as a whole, modern astronomers recognize 88 constellations. Of these 30 (most of them constellations of the southern skies, invented by moderns) represent inanimate objects. Of the remaining 58, mostly ancient, 36 represent mammals (including 14 human beings), 9 represent birds, 6 represent reptiles, 4 represent fish, and 3 represent arthropods. Quite a heavenly zoo!

Odd, though, considering that most of the constellations were invented by an agricultural society, not one represents a member of the plant kingdom. Or can that be used to argue that the early star-gazers were herdsmen and not farmers?

The line of the ecliptic is set at an angle of $231 / 2^{\circ}$ to the celestial equator (see GHOST LINES IN THE SKY, F \& SF, May 1964) since, as is usually stated, the Earth's axis is tipped $231 / 2^{\circ}$.

At two points, then, the ecliptic crosses the celestial equator and those two crossing points are the "equinoxes" ("equal nights"). When the Sun is at those crossing points, it shines directly over the Equator and days and nights are equal (twelve hours each) the world over. Hence, the name.

One of the equinoxes is reached when the Sun, in its path along the ecliptic, moves from the southern celestial hemisphere into the northern. It is rising higher in the sky (to us in the northern hemisphere) and spring is on its way. That, therefore, is the "vernal equinox" and it is on March 20.

On that day (at least in ancient Greek times) the Sun entered the constellation of Aries. Since the vernal equinox is a good time to begin the year for any agricultural society, it is customary to begin the list of the constellations of the Zodiac, as I did, with Aries.

The Sun stays about one month in each constellation so it is in Aries from March 20 to April 19; in Taurus from April 20 to May 20 and so on. (At least, that was the lineup in Greek times.)

As the Sun continues to move along the ecliptic after the vernal equinox, it moves further and further north of the celestial equator, rising higher and higher in our northern skies. Finally, half way between the two equinoxes, on June 21, it reaches the point of maximum separation between ecliptic and celestial equator. Momentarily it "stands still" in its north-south motion, then "turns" and begins (it appears to us) to travel south again. This is the time of the "summer solstice" where "solstice" is from the Latin, meaning "sun stand-still."

At that time, the position of the Sun is a full $231^{1 / 2^{\circ}}$ north of the celestial equator and it is entering the constellation of Cancer. Consequently, the line of $231 / 2^{\circ}$ North Latitude on Earth, the line over which the Sun is now shining, is the "Tropic of Cancer." "Tropic" is from a Greek word meaning "to turn.")

On September 23, the Sun has reached the "autumnal equinox" as it enters the constellation of Libra. It then moves south of the celestial equator, reaching the point of maximum southerliness on December 21, when it enters the constellation of Capricorn. This is the "winter solstice" and the line of $231 / 2^{\circ}$ South Latitude on the Earth is (you guessed it) the "Tropic of Capricorn."

Here is a complication! The earth's axis "wobbles." If the line of the axis were extended to the celestial sphere, each pole would draw a slow circle $47^{\circ}$ in diameter as it moved. The position of the celestial equator depends on the tilt of the axis and so the celestial equator moves bodily against the background of the stars from east to west in a direction parallel to the ecliptic. The position of the equinoxes (the intersection of the moving celestial equator with the unmoving ecliptic) travels westward to meet the Sun which follows its apparent eastward motion.

The equinox completes a circuit about the ecliptic in 25,760 years which means that in 1 year the vernal equinox moves $360 / 25,760$ or 0.014 degrees. The Sun, in making its circuit, comes to the vernal equinox 0.014 degrees west of its position as the last crossing and must travel that additional 0.014 degrees to make a truly complete circuit with respect to the stars. It takes 20 minutes of motion to cover that additional 0.014 degrees. Because the equinox precedes itself and is reached 20 minutes ahead of schedule each year, this motion of the earth's axis is called "the precession of the equinoxes."

Because of the precession of the equinoxes, the vernal equinox moves one full constellation of the Zodiac every 2,150 years. In the time of the Pyramid builders, the Sun entered Taurus at the time of the vernal equinox. In the time of the Greeks, it entered Aries. In modern times, it enters Pisces. In 4000 A.D. it will enter Aquarius.

The complete circle made by the Sun with respect to the stars takes 365 days, 6 hours, 9 minutes, 10 seconds. This is the "sidereal year." The complete circle from equinox to equinox takes 20 minutes less; 365 days, 5 hours, 48 minutes, 45 seconds. This is the "tropical year" because it also measures the time required for the Sun to move from tropic to tropic and back again.

It is the tropical year and not the sidereal year that governs our seasons, so it is the tropical year we mean when we speak of the year. The actual calendar year we use in the Gregorian calendar has an average length of 365 days, 5 hours, 49 minutes, 12 seconds, and is thus 27 seconds longer than the tropical year. This will build up to one day in excess every 3,200 years. Sometime about 4700 A.D. therefore some leap year will have to be converted into an ordinary year and mankind will be set for another three millennia.

The scholars of ancient times noted that the position of the Sun in the Zodiac had a profound effect on the Earth. Whenever it was in Leo, for instance, the Sun shone with a lion's strength and it was invariably hot; when it was in Aquarius, the water-carrier usually tipped his urn so that there was much snow. Furthermore, eclipses were clearly meant to indicate catastrophe, since catastrophe always followed eclipses. (Catastrophes also always followed lack of eclipses but no one paid attention to that.)

Naturally, scholars sought for other effects and found them in the movement of the five bright star-like objects, Mercury, Venus, Mars, Jupiter, and Saturn. These, like the Sun and Moon, moved against the starry background and all were therefore called "planetes" ("wanderers") by the Greeks. We call them "planets."

The five star-like planets circle the Sun as the Earth does and the planes of their orbits are tipped only slightly to that of the Earth. This means they seem to move in the ecliptic, as the Sun and Moon do, progressing through the constellations of the zodiac.

Their motions, unlike those of the Sun and the Moon, are quite complicated. Because of the motion of the Earth, the track made by the star-like planets forms loops now and then. This made it possible for the Greeks to have five centuries of fun working out wrong theories to account for those motions.

Still, though the theories might be wrong, they sufficed to work out what the planetary positions were in the past and what they would be in the future. All one had to do was to decide what particular influence was exerted by a particular planet in a particular constellation of the zodiac; note the position of all the planets at the time of a person's birth; and everything was set. The decision as to the particular influences presents no problem. You make any decision you care to. The pseudo-science of astrology invents such influences without any visible difficulty. Every astrologer has his own set.

To astrologers, moreover, nothing has happened since the time of the Greeks. The period from March 20 to April 19 is still governed by the "sign of Aries" even though the Sun is in Pisces at that time nowadays, thanks to the precession of the equinoxes. For that reason, it is now necessary to distinguish between the "signs of the Zodiac" and the "constellations of the Zodiac." The signs now are what the constellations were two thousand years ago. I've never heard that this bothered any astrologer in the world.

All this and more occurred to me a couple of months ago when I was invited to be on a well-known television conversation-show that was scheduled to deal with the subject of astrology. I was to represent science against the other three members of the panel, all of whom were to be professional astrologers.

For a moment, I felt that I must accept, for surely it was my duty as a rationalist to strike a blow against folly and superstitution. Then other thoughts occurred to me.

The three practitioners would undoubtedly be experts at their own particular line of gobbledygook and horse fertilizer, and could easily speak a gallon of nonsense while I was struggling with a half-pint of reason.

Furthermore, astrologers are adept at that line of argument that all pseudo-scientists consider "evidence." The line would be something like this, "People born under Leo are leaders of men, because the lion
is the king of beasts, and the proof is that Napoleon was born under the sign of Leo."

Suppose, then, I were to say, "But one-twelfth of living human beings, amounting to $250,000,000$ individuals, were born in Taurus. Have you, or has anybody, ever tried to determine whether the proportion of leaders among them is significantly greater than among nonLeos? And how would you test for leadership, objectively, anyway?"

Even if I managed to say all this, I would merely be stared at as a lunatic and, very likely, as a dangerous subversive. And the general public, which, in this year of 1964, ardently believes in astrology and supports more astrologers in affluence (I strongly suspect) than existed in all previous centuries combined, would arrange lynching parties.

So as I wavered between the desire to fight for the right, and the suspicion that the right would be massacred and sunk without a trace, I decided to turn to astrology for help. Surely, a bit of astrologic analysis would tell me what was in store for me, in any such confrontation.

Since I was born on January 2, that placed me under the sign of Capricorn-the goat.

That did it! Politely, but extremely firmly, I refused to be on the program!


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> Whether the main point of this brief and poignant story lies in the penultimate or the ultimate paragraph, we leave to our readers to think for themselves. It may give them-and it shouldsomething to think about in either case.

## FORWARDING SERVICE

## by Willard Marsh

IF PAIN HIT WHEN HE WAS dozing, he would awaken instantly because it was the left side. And even though the pain was in the wrong location, all that his lulled mind could initially report was terror on the left. It was humiliating to be braced in a constant cringe. For years now, he had been creeping past obstacles of exertion. And scarcely into his forties he had developed an old man's gait and an old man's apprehensions.

Shifting position gingerly, Phillip lay there, conscious of his throbbing kidney and of the sounds and vistas of the six-bed ward as it sailed through another evening under banked riding lights. Smoke rose from the busted hip across the aisle as it lay monitoring an earphone, and other colleagues snored or muttered in response to footsteps of the uninfirmed, a separate race, as they
pursued their unearned liberty down distant hallways. The night music would later be augmented by an ambulance soloing its arrival or the muffled harmonies of bedpans being washed. And after three evenings of it Phillip was almost glad that the decision for surgery had been made. (He pictured it as something like cleaning out a carburetor. How did a man get gravel in his kidney in the first place?)

Meanwhile, his heart continued prowling his chest like the caged, manic animal it was. A vicious brute requiring twenty-four-hour humoring, it could leap free the first time you got distracted by a little binge, or even pulled too tightly on a shoelace-and strike both you and itself a mortal wound. And whenever it did, would there be anyone to care? He tried to tell himself that he had made it through other lonely mid© 1963 by Willard Marsh
nights, and he would get through this one, somehow. He could do it, if he had to.

Time passed, as it had to. And finally, with relief, he heard the tread of Herb, the night attendant. His figure bulked up in the half-light as he set the tray down on the bed table.
"How'd it go this evening, Mr. DeWitt?"
"Not too badly, thanks," Phillip said.

Herb switched on the bedlamp, his craggy, compassionate features searching Phillip's. He was a large man with a gentle touch.
"This should let you get a little sleep." As he prepared the syringe, he said, "Which arm'll it be?"
"Doesn't matter."
Phillip felt the cool swab of alcohol, the needle's sting, then settled back while Herb pulled up a chair to have a smoke. He, too, was single, Phillip had discovered; somewhere in his middle fifties, with a good portion of them spent right here. Not the most significant career one might elect, but for a man unburdened by either ambition or special skills, set in his easygoing ways, it was probably a comfortable enough existence. In addition, he ran a business on the side that, from all Phillip could gather about it, sounded more like a hobby than a source of revenue.
"Well, all set for tomorrow morning?" Herb asked.

Phillip smiled. "Suppose I could ask for a rain check?"

Herb chuckled.
"Seriously though, I'm a little worried, Herb. I have a fairly weak heart."
"I know. I saw your cardiogram."

Phillip waited.
"Well, what do you think?" he asked at last.

After a moment Herb said, "At least you'll have a good anesthetist in Dr. Abrahms."

But it came too late to be entirely reassuring. And at this stage Phillip wasn't particularly interested in any honest answers.

At last, Herb broke the intolerable pause to ask, "Remember the girl I was telling you about just the other night, Mr. DeWitt?"
"What? Oh yes, Milly."
"Myra. M-Y-R-A," Herb said, in soft reproach. "Of course, she isn't a girl any longer, because it happened quite a while back. Anyway, do you remember the man involved?"
"Afraid not."
"Ackerman. Paul Ackerman."
"That's right, I got it now. Myra and Paul Ackerman."

Phillip's gratitude for a little conversation before the sedative took hold was undercut by his annovance at Herb's capacity for wandering. Like all bad storytellers, he got mired in petty details and forgot the meat of the anecdote.
"And Myra was one of your clients," Phillip said, remembering. "What was it this Ackerman fellow did to her, anyway?"
"It must have been something terrible. She never would tell me."
"Dear God," Phillip thought with a tired smile. But the drowsiness was setting in, and any kind of talk was an improvement over silently listening to his own heart. Poor Myra, and poor Ackerman, whose garbled histories were lost in Herb's diffusiveness. However it was that Ackerman had hurt her, Myra had a change of feeling years later and wanted to let him know he could come home; all was forgiven.
"Come home, all is forgiven," Phillip murmured. "You must get some pretty weird clients, Herb. But then, that service you run sounds pretty much on the weird side, too."

Herb chuckled, but only after an instant's hesitation in which Phillip realized he had been hurt.
"I mean, it's a little out of the ordinary line of messenger services, you'll have to admit."
"Oh, no doubt about it, Mr. DeWitt. But it fills a real need. You see, when someone you have a violent emotion about disappears without a trace, it can be pretty frustrating if you can't get word to them. I'd like to think that I take over at the point where the Dead Letter Office quits."
"I suppose the missing per-
sons bureau wouldn't be available for your clients," Phillip said, as numbness nibbled at his outer fringes, "since the people they're trying to get in touch with haven't broken any laws."
"Well, I don't know about that," Herb said. "I mean, whether or not you have to be involved in crime before the missing persons bureau will step in. But in any case, it's always too late to call in any authorities."
"What do you do, then? Run advertisements?"
"Well, not exactly. It's a sort of word-of-mouth arrangement." And even with his eyes closed, Phillip could sense Herb's awkwardness. "I just try to pass the information on, to whoever's liable to be in contact."

Phillip laughed sleepily. "My God, Herb, do you make any kind of income with such a sloppy system?" And again he realized by the silence, that he had hurt the older man. "I'm sorry, Herb, it's just that-"
"It's all right, Mr. DeWitt. I haven't been explaining it well, but it isn't easy to explain. There's no income involved," Herb said quietly. "I wouldn't capitalize on people's feelings. Besides, I can't even be positive that messages always get delivered. I do a certain amount of duplication, of course. Still, that's all my clients have to go on.

Phillip felt he must have
missed something. And while he descended like a stone toward slumber, ripples of consciousness receding from him, he wondered if he should become a client of Herb's. Was there anyone whom he had had a violent emotion about who could be told, "Come home, all is forgiven?" There may have been, but violent emotions were all in Phillip's past. With a heart like his, they were too costly a luxury.

Dimly, he heard Herb saying, "You awake, Mr. DeWitt?"

Phillip opened his eyes, turning to Herb with a smile. And now he remembered his question. "I don't understand about your messengers, Herb. What kind of people are they?"
"They're just ordinary, nice folks like yourself, Mr. DeWitt."

Curiosity made Phillip more awake. "But where do you get them, and what do you-"
"Why, I find them right here on the graveyard shift," Herb said as gently as he could.

Fully alert now, Phillip sat upright and stared at him.
"By the way, Mr. DeWitt," he said, "on that message to Paul

Ackerman from Myra? It's not 'Come home, all is forgiven.' It's just 'All is forgiven.'

Phillip began trembling.
"And one more, if it's all right with you," Herb continued. "It's to Stanley Papadakis: P-A-P-A, like in papa; D-A-K-I-S."
"Get out of here," Phillip said hoarsely. "You're a maniac!"
"No, I'm not." Herb rose reluctantly. "But I'm sorry you're taking it this way. I'm not responsible for the facts of life or death, Mr. DeWitt."

After a moment, Phillip said, "No, I guess you're not. What's the message to Papadakis?"
"That's better. I knew you were a gentleman, Mr. DeWitt."
"What's the message?"
"'We all miss you so.'" Herb hesitated, then said, "I guess I'll shove along now. No hurry on those, Mr. DeWitt. If you can't get to them just yet, they'll keep."

And listening to Herb's heavy tread going off, Phillip lay and wept the messages into his pillow, fixing them in his memory, knowing there was no one who would ever have to bring remembrances to him.

- George Orwell said, among other things, that all the main currents of political thought were authoritarian. And from such a current of thought came the police state, from the Spanish Inquisition to Nazi Germany, the sewer of history's political order. Although Science Fiction has speculated on such a possibility in The U. S. of A., I doubt whether it has ever been done in such a subtle, personal account as the following-where Roger David Smith, 35, President of the U. S. A., is faced with a chilling decision, involving the "Rights" of the individual vs. the "Integrity" of the state. E.L.F.


## THE UNKNOWN LAW

## by Avram Davidson

"Then you would say, sir, that the United States has no plans for occupying any of the Asteroids at all?"
"The United States has no plans for occupying any of the asteroids at all, at the present time. By that I do not mean to say that we have plans for occupation at any future time. Our action, our policy, in this regard, remains fluid. What we intend to do must continue to take notice of the intentions of the other Space Powers and the decisions of the United Nations."

There was a pause. The President faced the assembled reporters. Then, "Thank you, Mr. Pres-ident-" The reporters stood up
to applaud politely. They faded from view as the 3 D wall went blank. A faint bell sounded and a tiny light went on, set in the hood in the far corner of his desk. He lifted the hood and took up a cup of the famous green tea which was almost a trademark of his, steaming hot as he liked it. Prior to the campaign, "In public-coffee," his advisors had said. But then came the ugly business in Brazil, followed by other coffee pricing itself off the market followed by the popular coup d'état in Formosa (which had, for the moment, scarcely anything to sell-except green tea!). Formosa was popular, Rog Smith was popular, coffee was not, Cly-
mer continued to drink coffee. It wasn't that that elected Smith, anymore than hard cider elected Harrison, almost a century and a half earlier. It had helped, though.

Now he sat in the privacy of his White House office and sipped his cup, watching the wall come alive again-this time with open circuit 3D.-Steven Senty's bland face and voice giving the inconsequentia of the news.
"-and, à propose of the President's comments on the Asteroid question, it is agreed that the other as yet unfilled cabinet position will go to millionaire moonstate operator Hartley Gordon, though as yet official confirmation is lacking. Gordon's readiness to bail the party out of the hole the last campaign left it in hasn't been forgotten. Gordon, however, sees himself as an organizer, not an administrator; privately tells friends he will resign after clearing up the 'mess' the Space Department is now in. Likely successors include ex-diplomat Charles Salem Smith-no relation-" the newscaster smiled; the President made a rude noise - "and Party Stalwart J. T. Macdonald, who gave up a shoo-in chance at his father's old seat in the House to direct President Smith's campaign in the Southeast. Those in the real know say that his chances are better than might be expected."

Roger David Smith made a rude
noise again, followed it by a ruder word, drank tea.
"A small but time-honored tradition gets in its once-every-fouryears airing this afternoon when three major minor-or minor major, ha ha-officeholders pay their traditional call to greet the new president in person. Personal visits with a President have become increasingly rare, partly because of security problems: how dangerous they can be was demonstrated by the assassination of President Slade and the attempted assassination of President Byers: and partly because of the perfection and improvement of the 3D system. No official basis for this afternoon's ceremony exists, but old-time residents of the District like to tell how it originated. Back in George Washington's time, it seems that-" Smith touched the desk-dial.

The wall went blank, the President took another mouthful of unfermented tea, and reflected sourly just how much he hated the "like to tell" locution. Did the faces of old-time residents of the District light up when they had the opportunity to tell? Did they chuckle, set up the occasion or opportunity, did - Oh, well. He looked at his watch. It was just exactly time. He touched his fingertip to the Ready button. A bell chimed, some rooms away. Pleased, smiling, he repeated this, then three times, fast. Then
he frowned in self-reproof, withdrew his hand.

Roger David Smith was thirtyfive years old, just past the minimum age the Constitution sets for the Presidency, and had occupied the office for exactly three days and two hours. His dark, rugged face, marked with the scars of the shrapnel he had picked up in Sumatra, showed no trace of the strain inevitable to the time and place. The new president had not even been born when Warren Gamaliel Harding was playing hide-and-go-seek with his teen-age mistress in the presidential cloak room; nor when John Calvin Coolidge took two-hour naps every afternoon on the sofa in his White House office.

Some recollection of this may have been in the President's mind; just before the press conference he had made a teleview call (untapped-the presidential circuit was said to be untappable: he hoped so, but had taken care to keep the conversation innocuous), and a woman's face was still in his eyes and a woman's voice still in his ears-would always be, it seemed-and although poor Harding had had enough difficulty concealing his own cheap amour, the light which beat unceasingly down on whoever held the office was now almost intolerable.

Smith got up from the desk and faced the door just as it opened, just as the Chief Usher's voice
announced the callers. He frowned again, slightly, trying to remember just exactly what it was the retiring president had said to him three days ago; quickly erased the frown and let the thought fade. He smiled politely. The smile was not returned by the three minor major, or major minor officeholders, as they entered.

There was the usual brief seesawing before the order in which they approached the president was decided. Anderson, the Federal Armorer, was first; a squareshaped, ruddy man, with crispy grey hair. After him, the Ser-geant-Secretary of Congress, Lovel, tall and bony and pale. Both wore the plaids which were, with their short capes, fashionable for formal but less-than-ceremonial occasions. Dressed in the limegrecn which psychodynamicists included among the preferred shades for work clothes was Gabrielli, Civil Provost of the Capital, elf-small and moving soundlessly; the President knew that he held the Medal of Honor for his part in the assault on Telukbctung.

Not one of them smiled.
The door closed behind them, and, after a second or two, the silence was broken by the small noise of the door in the outer office being shut.
"Gentlemen," said Roger David Smith, keeping up the little smile, though with a little diff-
culty. He extended his hand. Each of the callers took it in turn; still, none smiled. A feeling of unease settled on the President, not great, but definite. Thoughts of other times he had felt it came to him in quick-rushing reflection. There was the time he had been summoned to see his CO, in Su matra, near The Rice Paddy, that dreadful summer, expecting to be court-martialed for exceeding his orders; instead he had been commended for his quick thinking. There was the time six Party leaders had called on him in his hotel room at the Convention, to tell him (he had been thinking) that he stood no chance after all of being offered the vice-presidential nomination; instead they had asked him to allow his name to go forward for the presidency. And there was the third time, in between the other two, when he had first met the woman to whom he had earlier this afternoon spoken on the teleview. She doesn't like me, was his instant thought then. But she had become his mistress after all.

She could not become his wife.
"Mr. President," said Anderson, "we have come to ask you to accept our felicitations on your selection as Chief Magistrate of the Republic, and to assure you that we stand, as always, ready to assist you in maintaining the integrity of our national confederation."

In the silence which followed this declaration Smith had time to reflect that it all seemed damned odd. He started to say, "Thank you," but Anderson was already speaking.
"We'll be as brief as we can, sir," he said. "We've made this same declaration to other presi-dents-in happier times, in unhappier times, and in times equally unhappy. I've done it on five occasions-I'm acting as spokesman because of seniority in office - Lovel and Gabrielli have done it four times each."

The President of the United States said, "I don't really know -"
"You don't really know what this is all about, sir, do you?" Roger David Smith shook his head. The Federal Armorer nodded, unsurprised. "Except-Well, I remember now, just before we left for the inauguration, President Byers told me . . . let's see he did tell me you would come here today to tell me something. And he said, 'You'd better believe them, too.' I remember now. I was a little surprised, but there were so many other things on my mind right then . . . And besides that, only what I've seen in the newspapers and 3D: very little." This was all damned odd, the president thought. He thought also of his appointments schedule . . . the Ambassador of the great (and sole remaining) neu-
tral power of the Nether Orient, two Western state governors eager to see what they could do about mustering regional support for the president's program (and even more eager to see what they could do about mustering presidential support for their own putative senatorial campaigns), the United States Representative to the U.N.-who, of course, should have been scheduled before the governors: but politics had to go on as usual, no matter what. Even if the "what" be the ever-shaky Condominium of the Moon, the threat of the South American Civil War spreading into Central America, the looming rocketry strike, and-not once and again, but again and againthe matter of the Asteroids Still, his appointments secretary had allotted fifteen minutes to these three men. So-
"As I understand it, this tradition began when the first three men to hold your office saved George Washington from an assassination attempt," said President Smith. "And that he promised them that they would have the power to nominate their own successors and to greet every new president on the third day of his term. Isn't that-?"

Anderson asked, "Correct? Not quite, Mr. President."

Smith caught a fleeting resemblance, in the older man's face, to his own father's. Quickly, the
thought brought others: his father's insistence, gentle but insistent, when young Rog Smith had failed to make the Space Academy, that he go to law school rather than Paris; then Sumatra, cutting short his legal career before it had really begun; the entry into politics via a local "reform" club; then Sarra-

For ten years, almost, everything had been Sarra. Jim, too, of course, but mainly Sarra. The state legislature, the race for the House seat, getting Jim's father to use his great popularity and influence And how had he, Roger David Smith, repaid the old man? By putting horns on his son. Fortunately, the old man never knew. But Jim knew-Jim must know. He just didn't care. So Roger David Smith, here he was: the high school teacher's son, the youngest man ever to sit in the White House. Jefferson, Jackson, Lincoln, the two Roosevelts . . . and now Rog Smith. And it was all Sarra. She would have made a damned vigorous president herself, he thought, not for the first time. Only she would never do it, even if it were possible; she'd rather have Jim be elected, had the chance existed, and rule through him. Rule? Reign!

And, sighing, without being aware that he was sighing, his eye fell on the new Asteroid chart they had installed only this morning. White lights for the U.N.,
blue for the U.S.A., red for the U.S.S.R., yellow for the disputed ones-ones which were, in American eyes, disputed: the Russians, of course, had a different listing.

His eyes came back to Anderson, his mind recalled Anderson's last comment. "'Not quite correct?' Your jobs aren't civil service and they're not on the patronage list, either. So-"

Lovel, saying nothing, canted his long gaunt face a few inches toward his senior, who caught the movement, nodded, and said, "That's true enough, sir, about our being traditionally allowed to nominate our successors. Not exactly true about the assassination thing. Not the whole truth."

The whole truth, Anderson went on to say, standing on the rug which a Persian ambassador had given Mrs. Grover Cleveland; the whole truth was that during Washington's first Administration, at a time when New York was still the Capital, a great danger towards the nation had arisen, arisen in sceret-a cabal, as it was then called. A plot to seize power, to force the new president to follow the direction of a group of men who-alarmed by the radical ideas then emanating from Franceintended a more rigorous system of government.

There was evidence, oh, there was evidence in plenty. But it was not evidence that you could bring to court, on which you could
base a hope that the matter would be settled swiftly and peacefully.

Delay meant either a successful coup d'état and an oligarchy like that of the Venetian Republicrule by the heads of the great families, secret police, dungeons, and everything hateful and dangerous to liberty-loving Americans -or else civil war. The nation was now, the nation was young and weak, operating under a Constitution barely tried and largely suspect. British troops still maintained bases on American soil, Spanish armies ringed our Southern and Western borders, French navics were on the seas; and the Indians-still powerful-were everywhere
"l'se never heard a word of such a plot," Smith declared. "I'm not sure I believe it. Although-" memory flashed "-is this what President Byers meant when he said I'd better believe you? Be-causc-"
"It's all true, sir," Anderson said. "Great names were involved. Conway's Cabal was nothing in comparison to it. Three men came and brought the evidence before President Washington-they'd served under him in the War of the Revolution-they presented him with the evidence on his third day in office. One was the Federal Armorer, William Dickensheet."
"One was the Sergeant-Secretary of the Congress, Richard Main," said Lovel.
"The third was Simon Stavers, Civil Provost of the Capital," Gabrielli said.

President Smith stared at them. It hardly seemed possible to remain in doubt of these three men, known to be honorable career men, sober, stable and loyal. But surely they had not come to give him a history lesson? "Go on," he said.

Those three (Anderson continued) discussed the matter a whole night through with President Washington. They debated as to what the right course would be. Speed-as it was counted in those days of slow and difficult transport and communicationspeed was essential, if the country was to be spared either a tyranny whose end no man could foresee, or a bloody domestic war. Wars, perhaps, and perhaps ending in invasion and conquest and an end to national independence.

Despite the teleview, the luminescents, the model on his desk of the latest moonship, Roger Smith felt something of that evening so far back-he believed it now, he did believe; it was impossible to doubt these three good men any longer: the archaic formula of their greeting to him (". . . our felicitations on your selection as Chief Magistrate we stand, as always, ready to assist you in maintaining the integrity of our national confederation) -that long-distant night
when the Father of his Country, no doubt with his wig set aside and perhaps his famous painful and ill-fitting false teeth as well, debated what move to make and make fast . . . and the candles guttered in the dimness. President Smith had his own problems, the United States of America under the First Administration of President Roger David Smith had its own problems. They were heavy, grave and great, and no one now spoke of or scarcely dared dream of any "return to normalcy."

He leaned forward, caught up in this account (unaccountably, till now, concealed from him) of the Nation's first crisis under its Constitution. "What did they decide to do?" he asked.
"Immediate contact was made," Anderson said, in the same steady tones he had used throughout, "with those members of the Government who were then in town." He paused. His colleagues nodded slowly, gazing steadfastly at the President. "The leader of the cabal was known, his whereabouts were known. It was also known that if he were removed, the scheme would collapse. It was agreed that the welfare of the Nation depended upon-de-manded-his removal.
"He was, accordingly, removed."
"How?"
"The decision was, by pistoling."

Smith half-turned his back and struck his fist on his desk.
"Are you trying to tell me," he cried, "that George Washington ordered the murder of a man he couldn't convict on a fair trial?" And swung around to face them again.

But they wouldn't admit the word, murder. Execution was not murder. The slaying of an enemy was not murder in time of war. Nor did "war" depend upon a formal declaration. The welfare of the Nation had to be the paramount thing in the eyes of its Chief. The enjoyment of private scruples was a luxury with which he had no right to indulge himself in his official capacity.
"Go on," said Smith.
Could anyone looking back, Anderson went on, doubt that the original decision was the best one? It was obvious beyond doubt even at the time. It had been obvious also that similar situations would arise again-and again and again. This was inevitable. So there grew up a law [he saidand the nods of his colleagues' assents confirmed his words], a law uinwritten, but, unlike the so-called "unwritten law" justifying a husband's killing his wife's lover, it was an unknown lawunknown except to the fewest possible people-the men who held these three offices, their predecessors, the President, and the ex-Presidents-but a law, none-
theless: authorizing a President to order the death of any person in the country whose existence constituted what was later to be called "a clear and present danger" to the welfare of the Nation.
"My God!" said Roger Smith. Then-a sudden rush of interest overcoming his shock-he asked, "How in the Hell did they miss Aaron Burr?"
"He skipped the country too soon. And by the time he came back he wasn't dangerous."
"I see. Well-"
"There have to be limits, of course, Mr. President," the Federal Armorer explained. "The President has to declare his intention to us. And he can only do it once. Once in each term of office, that is. Because there have to be limits. There have to be-" His voice, for the first time, rose just a trifle.

After a moment, "I see," said the President. "How often-?"
"In the country's history? Seventeen times. Who carries out the decision? One of us. How chosen? By lot. Is there any danger of detection? Almost none. Over the course of almost two hundred years," said Anderson, "certain techniques have been developed. Effective ones. How often during our own tenures of office? Once."

President Smith swallowed. "Who was . . . killed?"
"That question, sir, is not answered."
"I see. I'm sorry. Of course not. Well, which one of you-"
"And that question, sir, is not even asked."

There was silence. "You'd better believe them," ex-President Byers had said. Was there something of a deeper, personal knowledge in Byers' voice when saying it? Smith could not now remember, the Inauguration, only moments away, had driven anything but bare reception of the words from his mind. He searched his memory; who had died-sudden-ly-during the previous Administration, whose death might have. . . ? No name occurred to him. He glanced at the clock set into his desk-top at a slant. The fifteen minutes were up. During that fifteen minutes anything might have occurred. Panama invaded by the Continentalists ("South America ends at the northern boundery of Mexico," Lopez-Cardoso was said to have said; he was dead now, could neither confirm nor deny it; but his slogan of One Continent, One People, One Faith, One Destiny was certainly very much alive), the friendly but unstable Colored government of the Free Cape State overthrown by either Black or White intransigents, another "incident" unfavorably effecting the Lunar Condominium - nothing, it seemed, could affect it favorably any more, further troubles in the still-vex'd Asteroids: any or
even all of these could have occurred in the quarter-hour he'd just spent.
"Have you anything else to tell me?" he asked, starting forward.
"Only that at least one of us will remain in the District at all times, in case of, well, immediate need, let's say . . . No, sir, nothing else to tell you."

Smith nodded. Anderson glanced at his colleagues. Gabrielli, the most junior of the three in office, spoke for the first time. "Mr. President, we tender you our renewed assurances that we stand, as always, ready to assist you in maintaining the integrity of our national confederation. And we ask your permission to withdraw." He was elf-small and some people found him amusing, but the President knew that he held the Congressional Medal of Honor for his part in the assault on Telukbetung.

After those three came the ambassador of the great neutral power of the Nether Orient, equally full of his grave misgivings about American space policy and his grave insistence upon increased American financial aid to his own country, both couched in the most mellifluous English, And after him came one of the Western American state governors, slyly awkward or awkwardly sly, not even knowing the name of the diplomat who had preceded him
but knowing just what to offer and just what to demand in the way of political horse-trading. Neither of these two were present in person, of course. And after him-
"What are you doing here, Jim?" the President demanded, frowning. "Governor Millard was supposed to be next; you're not down for an appointment until tomorrow afternoon." He was brusque, not so much because he gave a damn about that as because he had been wondering-tired, disgusted, knowing that his impending interview with the U.S. representative to the U.N. would bring new problems which neither weariness nor disgust could ig-nore-had been wondering if there were any chance of his being with Sarra that night. There was, he had finally realized, no chance at all. A President of the United States might sell his country down the river or let it drift down by incompetence, but he could never under any circumstances let it be hinted that he had a mistress. Perhaps ten years ago he might have gotten away with it, so far had the pendulum swung from the old morality. But there had been one, or perhaps two, scandals too many; now the pendulum was on the far swing again.

James Thackeray Macdonald smiled, waved his hand; Smith fancied he could smell the fa-
miliar odor of the man's cigars, but of course it was only fancythe 3D hadn't gotten that far yet, despite continued efforts. There was not the slightest chance in the world of Jim's being any sort of menace in his physical person, but-protocol was protocol. "The day I can't persuade Millard or a thousand yokels like him to trade appointments with me, that's the day I'll close the store and go fishing," Jim said, his ruddy face glowing and cheerful as usual.
"What did you promise him? Off-shore oil rights on the Moon?"

Macdonald leaned back in the chair which he had taken, unbidden, and laughed. It was the famous Macdonald laugh, with rich echoes of his famous father, and -despite everything-Roger Smith found himself smiling faintly. Jim had charm, if nothing else. And there was damned little else between the charm and the nothing else.
"Well, come on, Jim, what the Hell do you want?"
J. T. Macdonald smiled indulgently. "Yes, I know, Rog: okay, I'll make it brief, and then you can let Nick Mason tell you his latest hardluck story about the Rooshians and the Prooshians. Okay. I spoke to Harley Gordon just a few minutes ago, and he told me that he definitely will not stay in office more than three months, not if you offered him Manhattan Island for a nickel.

So what I want to know is, how about my taking an undersecretariate now, so I'll be able to step into his shoes without any trouble when he quits?"

The faint smile on the President's face had slipped easily into a frown. Macdonald's appointment to a Cabinet position had been suggested and not by the President, either. J. T.'s name had been, was being, frequently mentioned by the media in this connection, however; but speculation of this sort was too common for the President to think it seemed worth even an unofficial denial. He had assumed it would die down. But Jim seemed to be taking it seriously.
"Have you talked about this with Sarra?" Smith asked.

Now the frown was Macdonald's, as faint as the President's smile had been. "Dammit, Rog, I don't have to talk over every little thing with Sarra. I have a mind of my own, you know."
"A Cabinet appointment is no little thing, Jim. I never-no, don't interrupt me-I never promised it to you, I never even suggested it. I know Sarra did mention it, but I never thought you'd think she meant it seriously. Who it was that leaked the fact of your name having been proposed at all I don't know, but I can't be committed by a leak, dammit! You have no right, none whatsoever, to treat a lighthearted re-
mark of Sarra's as if it were a promise from me. I am not to be cornered that way. The Secretariate is out. And that means, so is an undersecretariate." Macdonald was still trying to speak, but the President swept on over him. "Besides, as far as I'm concerned, it's been definite for some time now that you would take a position on my personal staff here. Hasn't it? I value your talents, Jim, especially with meeting people face to face, and-"

But Jim wasn't taking the compliment. Thanks for nothing, was his attitude. He had no intention of becoming the Presidential Grover Whalen, he said, pinning carnations on visiting dignitaries' wives, and glad-handing prominent Rotarians and Exempt Spacemen from the Middle West, taking them on personally conducted tours of the White House.
"I deserve better," he said, stormily. "If you hadn't won in the Southeast you wouldn't be here-"
"Yes, you're a good man for smoke-filled rooms and rostrums, Jim, just as I've just told you: the personal touch. But-listenthe Southeast? Don't let's kid ourselves. The strategy there wasn't yours anymore than it was mine. It was Sarra's, all the way."

Macdonald uttered a short, ugly word. Roger Smith's head snapped back. "You're talking to the President of the United States," he said.

Macdonald laughed. "No, I'm not. I'm talking to the guy who sleeps with my wife."

Smith stared at him, bleakly.
Then he said, "I'm turning you off. You get out of there."

But Macdonald shook his head. "You talk to me or I talk to the press. Okay?" Smith said nothing, continued staring at him. "Okay," Macdonald muttered. What he was going to do, he said, leaning back, and taking out a cigar, was to give Rog a little history lesson, free . . . His expression, as he lit his cigar, raised his eyebrows, darted little glances at the grimfaced man viewing him, and gazed at the smoke as it came swirling from his own pursed lips, was that of an actor in a classical "B movie"-a heavy, who has just announced that he is "going to enjoy this, very much."
"Go ahead," Smith said. "But just remember that while you are getting this off your chest, or wherever the Hell you've been keeping it, that the job I have is the most difficult one in the world, and that the world isn't going to stand still for either of us. Now: Go ahead."

Jim, who had waved his hand, lightly, at mention of difficulty, now nodded, puffed at his cigar. After a moment he said, "You've heard, I suppose, of Charles Stewart Parnell."
"Parnell? Parnell? The Irish-"
"That's the one. Home rule for
dear old Ireland. The 1880's, 90 's. Well, Parnell had a friend named Captain O'Shea-Willie O'Shea. Ever heard of him? No? Doesn't matter. O'Shea, you see, was useful to Parnell-acted as his confidential agent, took care of difficult matters for him, let his own political career languish in order to help Parnell's . . . And Parnell appreciated it. In fact, he appreciated it so much that he determined to keep O'Shea happy. That is, not exactly Captain O'Shea, but Mrs. O'Shea. The beautiful Kitty O'Shea. Willie wasn't good enough for her, it would seem. Whether he lacked looks, or glamour, or whether she couldn't twist him quite so far around her finger as she'd've liked to, who knows. Anyway, whatever it was that Willie didn't have Smith-oops, sorry: Parnellhad it."

He grinned, lifting his upper lip in front, and glancing sideways at the other man.
"Did Willie know about it? Oh, you bet your life Willie knew about it. He was nobody's fool. Of course he knew about it. Almost right from the start. Why didn't he do anything?" Jim considered his own question, shrugged. "Might be any one of a number of reasons. Maybe Willie didn't think that something was necessarily wrong just because an old book said it was. Maybe Willie liked Parnell-maybe he even loved

Parnell, hmm?-so much that he just didn't care. Or . . . maybe even . . . maybe Kitty was the kind of woman that no one man could satisfy, hey? Oh, I don't just mean sexually. Maybe she had other desires-power, say. A lust for intrigue, for action, for-And maybe Willie figured that, if there had to be another man, well, he'd rather it was Parnell than anyone else. Could've been any of those reasons. Or all of them. Hey, Rog?"

Roger David Smith continued to stare at him, said nothing. Now and then he raised a hand and stroked the tiny scars on his face. Macdonald took another fleeting look at him, resumed.
"Well, where were we? Oh, yes-'And the song he sang/Was, "Old Ireland free"'-well. Home Rule. It was almost all wrapped up, you see. Gladstone was all for it. Ireland was to have its own government at last, with Parnell as Prime Minister. Now, Willie had worked as hard for the cause as any man. And he felt it was time that he had his reward. It was a modest one-a place in Parnell's Cabinet."

After all, what difference did it make who held what Cabinet post? The actual work was always done by underlings, career men, drudges who delighted in details and red tape and hard work
"Do you see the point, Rog?"
The President nodded. "I see
it. And the answer is still 'No.'"
For the first time something like uncertainty flickered across Macdonald's face. "Ah, come on, Rog," he said, almost pleadingly. "You know something? I wouldn't make the worst Space Secretary in the world. I've followed things closely, damned closely. I've read up on it very, ver-ry carefully. I've got ideas which go beyond re-organizing the bookkeeping system, which is about all that Hartley Gordon has in mind, or just sitting tight and hoping that the bogeymen will go away, which is all that Salem Smith has in mind."
"You've got ideas?"
Evidently stung by the tone of the questioning voice, Macdonald went from ruddy to red. "Yes, l've got ideas," he said. "And a lot of other important people have the same ideas-people whose support you'll damned well be needing." His eyes left the President's face and rested on something in the White House room behind the President; met the President's eyes as he returned his gaze; for an instant, fell; then faced him squarely and defiantly. Smith turned his head. There it wasthe white, blue, red and yellow lights of the newly-installed Asteroid chart.

The President snorted. What would Macdonald do? he demanded. Occupy the Asteroids? Was that one of his ideas?

Yes, it was. It certainly was. The USA was tied hand and foot in one big Gordian knot, he said. The Condominium of the Moon, just look at it! The Russians did as they damned well pleased, and in return for being let alone they raised every kind of Hell imaginable with what the United States was doing. Whenever the United States did anything, that is; which was damned seldom . . . too damned seldom. And Mars? The U.S. had one station on Mars, count them, one; the British had one; the U.N. had two; and the Russkies had four! The same as everyone else put together. And yet there were people claiming that the single American Mars Station was costing too much.
"In a way they're right, Rog," Jim said, confidently now-almost cockily. "For a weather bureau, which is about all we use it for, it is costing too much. But-Rog-if we occupied the Asteroids, then Mars Station could be busier than New York! Androcketry strike? Hell, there'd be so much doing, we could double, triple their pay-the 'teers would be so busy making money they wouldn't have time to strike!"
"Uh-huh. And which ones would you occupy? Just the ones we claim? The ones the Russians claim, too? Any unclaimed ones we fancy? Or the whole works, maybe?"

For a moment Macdonald's face
hung askew. Then something hateful and ugly entered it. Then he caught control of himself once more.
"How much longer are the American people going to stand for this present set-up?" he asked. "How much longer are they going to sit still and let the Russians get away with insisting that everything they've already claimed is theirs and that everything they haven't claimed belongs to the U.N.? Where does that leave us? The American people-"

Smith got up abruptly, so abruptly that Macdonald jumped.
"I don't know who put you up to this-"
"Nobody put me-
"I could make a good guess. You can tell them that they picked the wrong cat to try the chestnut game. 'The American people'-? Listen, little Jimmy, the American people showed last November what they wanted in the way of leadership, and it wasn't your hand that went on the Bible three days ago."
"You-"
"Me. That's right. And I'll tell you something else, I'll give it to you right between the eyes, fellow -even if you didn't have these dangerous ideas you still wouldn't stand a chance at the job. Not a pip in a snow-hole. Because without Sarra you're not worth a-"

Scarlet, his cigar fallen unnoticed from his hand, Macdonald
on his feet gestured and yammered in incoherent rage.
"My appointing you, if you hadn't so obviously sold yourself out, would have meant that she'd be the brains of the post. And I don't need her there, I don't want her there."

Now silence fell. Outside, the wet grey afternoon faded as the exterior lights went on.
"Then it's 'No'," Macdonald said, very softly. He looked older, he looked genuinely stricken, he looked a little sick.
"It's 'No,' Jim."
Jim nodded. "I'll wait . . . I'll wait until tomorrow. Just the same. Because . . . 'history lesson' . . . Parnell said 'No' to Captain Willie O'Shea, too, you see. And then Willie sued Kitty for divorce, naming Parnell as corespondent. He got the divorce. And Parnell got the axe. His party kicked him out. Gladstone backed off on Home Rule. Parnell died of a broken heart. And Ireland drowned in blood."

He paused in turning to go, did not look back.
"But I'll wait till tomorrow, anyway," he said.

Nicholas Mason, the United States Representative to the U.N., his face noble and haggard, thanked the President again for having asked him to continue in office. Then, in a low voice, he told his latest tale of defeats,
struggles, major setbacks, and minor victories.

Smith interrupted him. "What in your opinion, Mr. Ambassador -in your personal and confidential opinion-would be the effect of a scandal, an open and notorious and unsavory scandal, concerning the personal life of the President?"

Mason brought his mind to bear upon this abrupt question with visible difficulty. Slowly he raised his eyes and looked at Smith. Then a tremor ran over his face. "I can hardly suppose that this question is hypothetical, Mr. President?" The President shook his head. In a voice still lower, Mason asked, "Could this . scandal of which you speak be averted? Is it possible? Then —"
"Averted only at great cost to the welfare of the Nation, and possibly, probably, involving dangers to its prestige, its proper functioning, and perhaps even its peace."

Mason slowly raised his hand and laid the palm against his face. "I may at least hope that the danger could not be that great. Even so, it would then be a matter of balancing dangers . . . costs. I need hardly tell you-I need hardly tell you-at this juncture, anything which would divide the country might well destroy the country. And then-you spoke of our prestige-it's none too high
as it now is . . . I . . . " His voice died into a whisper.

Smith muttered, "I could resign, I suppose."

Mason snapped straight. "No President of the United States has ever resigned! Mr. President! Had you forgotten who would succeed you? If the present VicePresident were put in charge of a chicken-yard, my money would be on the hawks and the weasels!"

Smith's face twisted.
"You have been a soldier, Mr. President," Mason continued. "I have not. But I know, and you surely know, that there is more than one way to win a battle. It is up to you to decide which way it has to be now. And . . . need I say . . . if I can in any way.

The President shook his head.
Left alone, he got up and went to the windows. It was miserable weather. Only three days ago he had been inaugurated, on a crisp and sparkling afternoon. Despite all he knew of the world scene, the day had seemed flecked with gold. He had caught sight of Sarra, face shining with triumph, dressed in a grey robe which had appeared to his eyes then as brighter than scarlet or crimson. Now the dying sun broke through the clouds briefly and turned the wet walks and puddles red: yet his mood was grey, greyer than it had ever been before in his life.

Sarra's voice rang in his ears, her face was before his eyes, and for the first time he failed to draw comfort from either. Could she deal with Jim at this late stage? Persuade him to do nothing? Could he be trusted to remain persuaded?

Or should he, the President, give the man the office he coveted, and oblige him to live up to his own first picture of it? - a sinecure in which the actual work was done by others? And depend upon the tight reign of the President from there on?

But would Jim remain content? Might he not have more "ideas"?-His own or others, it might not even matter: Ideas, policies, plans, purposes? Ambi-tions-Where would it stop? James Thackeray Macdonald, redfaced little politician, the Secret President of the United States!

But where, where had he gotten the nerve? Why-and howafter all these years, had he brought himself to defy his wife? Except in those easy cajoleries which came so naturally to him, and which had made politics his natural field; except in these shallows he had scarcely ever seemed to have a mind of his own or an ambition which was not Sarra's. Why, after all these years, had the worm turned?

For a long time, in the lowering dusk, the President of the United States stayed at the win-
dow, deep in thought. Then he drew the curtains and went to the teleview.

He had thought that the three men might ask many questionsor, rather, bring forth cautions and disagreements disguised as questions-but they asked only two, after all.

Anderson, this time, was silent. It was Lovel who spoke first.
"Mr. President," he began, "have you concluded that in order
to maintain the integrity of our national confederation it is now imperative for you to invoke the unknown law?"
"I have," said Roger David Smith.

Lovel's face was impassive, but the skin seemed suddenly tighter upon the almost fleshless bones.
"What is his name?" he asked evenly.

Softly, almost gently, the President corrected him.
"Her name," he said.

## In this issue . . . Coming next month

It has been six months since the murder of John F. Kennedy and, although a new presidential campaign is already approaching, the events of that tragic November weekend are still very much with us. All of which has made us more sharply aware of the responsibilities and dangers of the Presidency of the United States than at any other point in our history. In this month's issue AVRAM DAVIDSON'S THE UNKNOWN LAW science-fictionally explores the presidential theme; and next month we bring you PHILIP K. DICK'S CANTATA 140, about a presidential campaign of the future, in which the candidates and the issues are shockingly (but quite logically) different. Both stories were written before the death of President Kennedy.

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