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THE BEHOLDER'S EYE, Jennifer H. Orr's first published story

fantastic SCIENCE FICTION

THE LAST MAN

A WORLD OF WHISPERING WINGS

INTELLIGENCE UNDYING

UTOPIA? NEVER!

UNTO US A CHILD IS BORN

new directions

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APRIL, 1979

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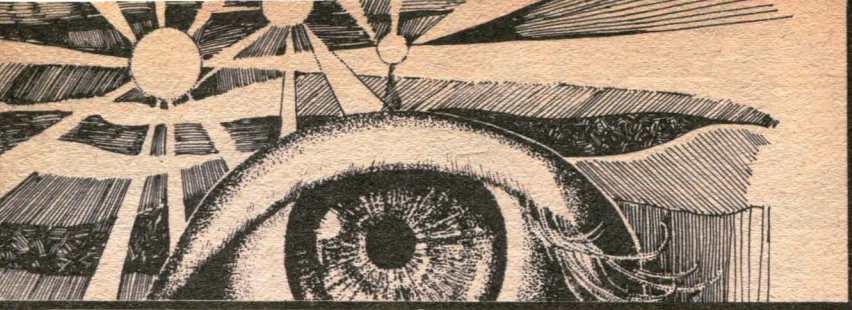
ABOUT THE COVER

We have conjured up some devilish aliens to tickle your imagination; an appropriate idea as mankind becomes increasingly fascinated with the possibilities of communicating with extraterrestrial intelligence. Evangelist Billy Graham predicts that 1979 will see us making such a contact. And noted astronomer Dr. Carl Sagan writes in the "Cosmic Connection" about the actual scientific search now underway for civilizations on other planets. This quest, once a matter for speculation, is now one for experimentation and observation. For instance, the great one-thousand-foot diameter radio-telescope at the National Astronomy and Ionosphere Center in Puerto Rico (run by Cornell University) is capable of contacting an identical copy of itself anywhere in the Milky Way Galaxy -- over tens of thousands of light-years away and into a volume containing hundreds of billions of stars!

Wonder what the guy on the other end will look like? Could be like our friends on the cover or most probably like nothing we could ever imagine.



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new directions

Nothing is constant in the universe; even publications will change and editors depart.

Ted White has moved on to other things, and we sincerely wish him well.

In the interim, we offer a fine collection of classic mind-teasers, carefully selected for the artful blend of speculation and entertainment evident in each piece. Also, you will notice plots you can get your teeth into, real heroes and satisfying endings. Yes, brain and gut *can* be fed in one serving.

We'd like to let our readers help us choose the best direction for the new "Fantastic." Please let us know what you think of this issue and of present-day science fiction in general. The latest trends indicate a burgeoning thirst for this kind of entertainment as well as a growing respect for a literary content which more and more begins to coincide with reality.

But, we feel nostalgia may also be a factor enhancing the popularity of the genre; appreciation of past masters in science fiction writing can help us keep our perspective as we evolve – so that we don't forsake something *very good* simply because it is not new.

"Fantastic" could be a training ground for a new level of science fiction writing – a kind of material that takes inspiration from the Golden Age and weaves a new brand of magic – tantalizing and readable, heady and fun, searching and logical.

We invite you to become the great sf writers of tomorrow through the pages of "Fantastic." Featured in this issue is an intriguing tale by Jennifer H. Orr of Appleton, Wisconsin. "The Beholder's Eye" is the first piece she has ever had published. Surely there are more gems out there like this one.

So, warm up the coffee, plug in the typewriter ... and get on with it.

Arthur Bernhard, Publisher

Note: Manuscripts should be typewritten, double-spaced, one side and include self-addressed stamped envelope. Those selected receive a penny per word, payable upon publication. Mail to Box 612, Scottsdale, AZ 85252.

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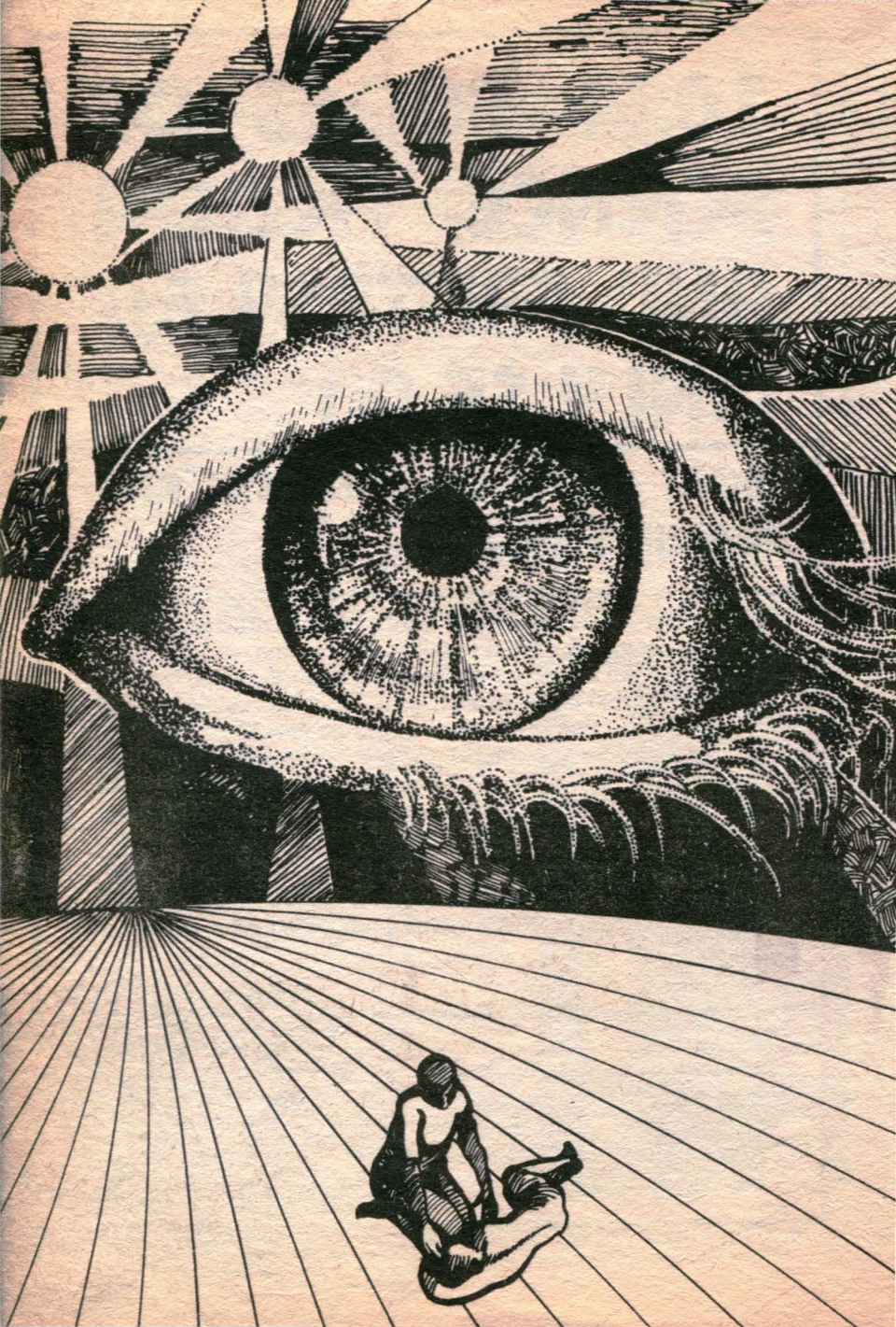
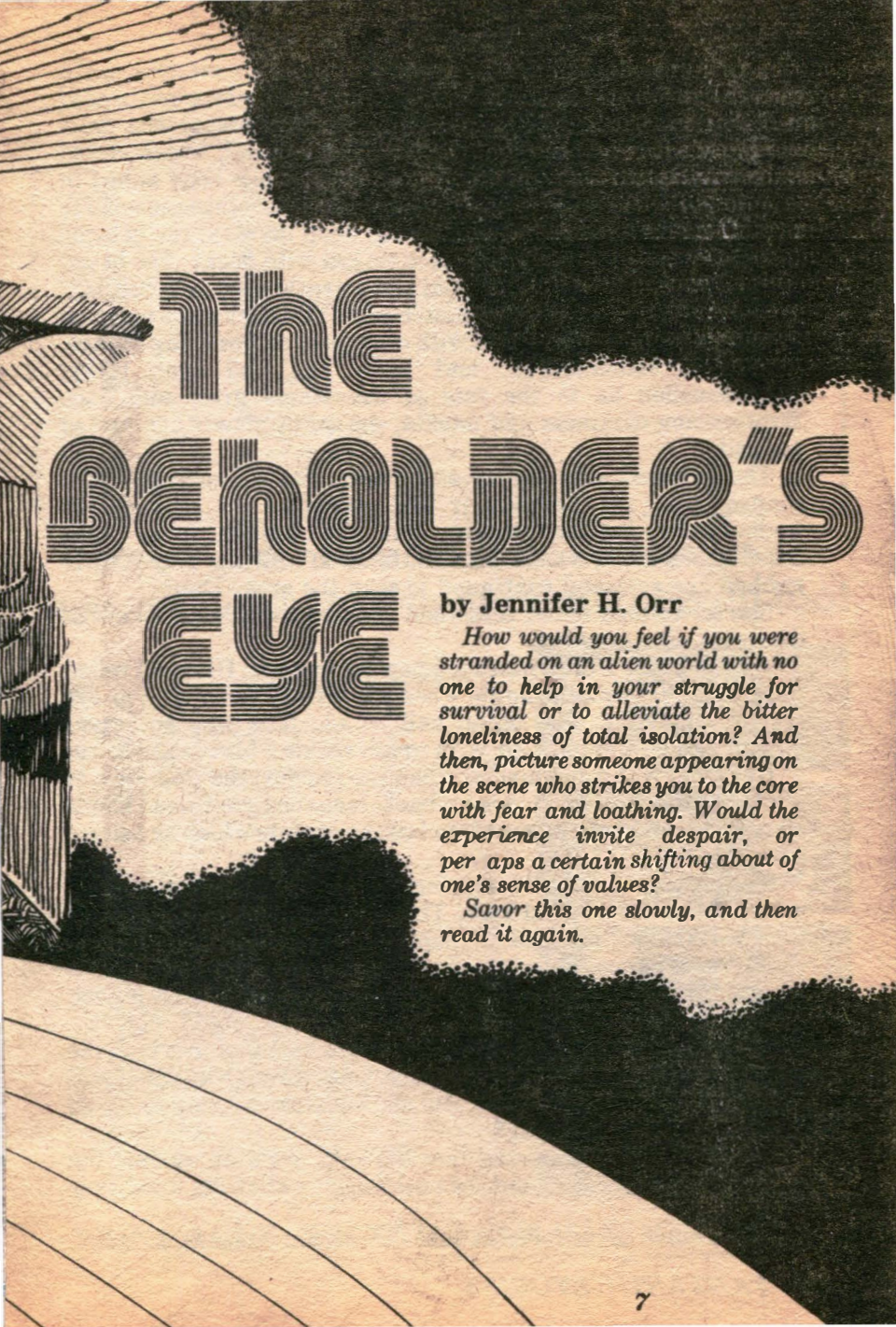




THE BEHOLDER'S EYE

by Jennifer H. Orr

How would you feel if you were stranded on an alien world with no one to help in your struggle for survival or to alleviate the bitter loneliness of total isolation? And then, picture someone appearing on the scene who strikes you to the core with fear and loathing. Would the experience invite despair, or per aps a certain shifting about of one's sense of values?

Savor this one slowly, and then read it again.

Consciousness slowly returned, and with it confusion and a dull, throbbing pain. She lay quietly, trying to orient herself and assess the evident damage to her person. The main source of discomfort proved to be her head, which rested against a rough, hard surface. The rest of her body ached in protest as she cautiously flexed her limbs, but nothing seemed to be seriously amiss. Drawing several deep breaths, she became aware of an unfamiliar fragrance tinged with decay. She heard the murmuring of moving liquid and a gentle, ceaseless rustling.

She opened her eyes and found herself looking up at a network of sinuous branches covered with clumps of shimmering foliage. Then she remembered, and knew she had been lucky. Apprehension as to the fate of the others grew into fear. Suppressing dizziness and nausea, she sat up slowly and looked around.

The ravaged ship lay several yards away. She knew, at a glance, that the damage it had sustained on impact was undoubtedly beyond repair, but she pushed away such hopelessness. Her vision became blurred and she impatiently rubbed her eyes and continued to scan the area. There!

She scrambled to her feet, then collapsed with a new wave of dizziness. She crawled.

Within a few feet of him she knew he was lost. His head rolled back at an improbable angle when she turned him over. One eye stared, unseeing. The other half of his face was no longer recognizable. She mewled with grief, rocking him in her arms.

Her grief was compounded when she reached the ship. He was pinned in the seat, head thrown back, face contorted, dead hands clenched around the edges of the bulkhead plate which had sliced away his life.

She leaned against the sloping side of the ship, drained and weary from her painful task. They were gone -- nothing more than two shallow mounds of alien soil. Listlessly gumming a dry cud of sustenance, it occurred to her that she would give some thought to finding a source of nourishment on this strange planet. The tanks were useless and her supplies would not last indefinitely ... unless some element could be found in which the spores would flourish and reproduce. Only through an act of will and effort would she survive. But she felt strangely numb. To go on alone -- maybe forever?

She got up and squeezed into the ship, pushing against the warped hatch, shutting out the new world, wallowing in solitary misery.

She awoke to self-evaluation. A certain amount of grief,

loneliness, and fear was natural and healthy, but it now threatened to become counter-productive. Ashamed at such a show of weakness, she resolved to go on as best she could and set about the business of survival. It became less of an empty task when she confronted her environment. So much to learn ... That stream -- was it safe to drink from? Where did it lead? The numerous plants -- some oddly familiar as echoes of her homeland ... And what of the creatures that lived here and pursued each other so loudly? Nighttime seemed to herald a sort of rampant lunacy. She had listened from within the ship, shivering slightly with fear of the unknown. But now, in the pragmatic light of the morning suns, she knew she must make this place her own.

The stream tested out as drinkable, if somewhat distasteful. Arming herself, she set out along its bank. Best to explore a small distance today. Must not wander far from the ship.

She encountered nothing alarming, but saw much that was encouraging and cause for wonder. The surrounding forest teemed with life. Little fuzzy creatures chittered and scampered through the underbrush -- agility on three feet. There were vines weighted down with gleaming fruits, bushes of many-colored blossoms. An ungainly animal with tiny, ferocious eyes peered at her through the trees. She hissed at it, and it darted away, crashing clumsily into everything in its path and snorting indignantly.

She ignored the fruits and collected specimens of moss and lichen. Presently it seemed best to return to the ship as the shadows lengthened.

That night, she studied her haul. Testing proved much of it edible, so she decided to taste a likely sample. Slightly bitter ... but with an interesting aftertaste. No harm done. At least she wouldn't starve.

The following weeks were busy, which was good for her morale, though she felt, nonetheless, oppressed at being so stranded in a strange land. The repairs necessary to render the ship operable had proven to exceed her capacity, as she had feared. It was, however, fortunate that more damage had not been done, and downright miraculous that anything at all had survived so near a brush with the greatest -- and rarest -- peril of hyperspace travel. The ship's emergence into space-normal would have been nothing short of explosively spectacular had it materialized any closer than the hairsbreadth which had separated it from another object. She had pondered long as to the nature of that object, only to conclude that it must have been one of the many tiny moons which orbited this globe. Whatever its

identity, its presence at that point in the space-time continuum had been sufficient to seal the doom of her ship and shipmates.

She labored at converting the wreck into suitable living quarters, continued to forage for food, and learned to fend off any animals which seemed threatening. Thus, a daily routine of work, reconnaissance, and research was established.

One day, while foraging, she found a wounded threeleg (as she had come to call the little creatures). She carried it home and nursed it in her loneliness. With her ministrations of trial and error, or, perhaps, in spite of them, it survived and grew quite tame. When fully recovered, it took to hanging around her clearing, along with assorted relatives -- all of whom clearly expected daily handouts. As the days grew cooler, they took up residence under the ship. She did not discourage this, and took it as a sign to prepare for a cold season of indeterminable length.

Exploration of the surrounding countryside had revealed no signs of civilization, but a plentiful supply of life-sustaining materials could be gleaned. At first, she had indulged in dreams of rescue and homecoming, but soon abandoned such hope as unrealistic and futile. Instead, many sleepless hours were spent in making elaborate plans for future long-range expeditions of this, her new world.

But now it grew colder, and more food must be sought. She had gone further than usual one day in her quest. An unfamiliar growth at the base of a tree caught her eye. She bent to study it, but jumped and swung around in alarm at the sound of something heavy crashing through the undergrowth. A singular creature emerged and stopped a few feet away. She stared in amazement and revulsion. It was a biped like herself, but taller, stockier, and fearfully ugly. Pallid flesh, covered with coarse, dark growth; hands sprouting numerous digits tipped with little shells; sunken eyes; tiny ears set close to the head and stunted nose; cavernous mouth rimmed with spikes which opened and closed, emitting a peculiar, rasping sound.

It had seen her, and stumbled toward her, hands outstretched. The curious coverings on its lower trunk flapped in a sudden breeze, revealing huge, unmistakably male genitalia.

She shrank back as it approached, repulsed by its rank odor. A cold, clammy hand grasped her arm. She wrenched herself free and fled, glancing over her shoulder for signs of pursuit. Seeing none, she paused and listened, heart pounding. Nothing.

She hurriedly made her way back to the ship, clamoured in, and pounded the hatch fast. All that night she listened, in fear which gradually ebbed to cautious vigilance. Then she began to

realize the wonder of it -- another being here, perhaps intelligent. But perhaps not. To stand and walk on two legs was not the measure of intelligence. And she resisted the possibility of likeness to one so loathsome ... so alien. Nonetheless, it was fascinating to have encountered a new creature. Regrettable that it had shown aggression. But wait... had it been aggression which prompted it to act as it had, or something else? Could it have been trying to communicate? Was it in need of help?

She was overcome with dread and aversion at the thought of seeking further contact, then chided herself for yielding to xenophobia. The thought occurred that this being bore the closest resemblance to her of any which she had seen. Perhaps this accentuated its differences, thus exaggerating her distaste. Anyway, to hide and cower was not only unwise, but impractical - to say nothing of frustrating!

She would investigate in the morning -- with great care.

It had grown colder during the night. The threelegs barely stirred as she left the security of the ship. She crept between the trees, alert to all sound and movement. The clearing of yesterday's encounter was deserted. She studied the trampled undergrowth from which the biped had emerged. Following the path of broken branches, she found a large footprint in the damp soil. She placed her foot in it, again noting her relative smallness. Similar tracks continued for some distance in an erratic path through the forest. Then, abruptly, she stumbled upon the object of her search. The biped lay face down, sprawled upon the ground, unmoving. She ran and took cover behind a thick tree, observing it from a distance for what seemed an eternity. It made no sound, nor did it move. She threw a rock which landed inches from its head with a resounding thump. No response. Finally, she approached it hesitantly, prodded it with her foot, and danced back. Nothing. It must be dead.

She felt an unsettling mixture of relief and disappointment. Then the creature moaned and rolled over, startling her into flight. Peering from behind the tree, she waited apprehensively for its next move. But it seemed oblivious to everything, and she grew tired of her vigil. Stupid beast to sleep so soundly out in the open ... She turned to go, then paused. What if it was sick? She shrugged. Little she could do, and probably dangerous to try. Abruptly, she started off through the trees, then ran to the stream, filled an empty pod with water, scampered back to the inert form, and placed the pod nearby. Going home, she wondered if she had been wise or foolhardy.

Next day, the pod had been drained of all water and the biped

was nowhere to be seen. As she stood gazing down at where it had lain, a frightful clamour erupted. She recognized the hideous screeching of a "fanger," a local predator which she had learned to fear and respect, and began to make her way back to the safety of the ship. Then a strange agonized cry brought her to a halt. Curious ... She moved in the direction of the sounds and parted a thicket of fruit vines. To her amazement, a clearing lay before her, dominated by the hulking form of an alien craft. It gleamed enigmatically in the afternoon sunlight, but there was no doubt of its origin as an artifact of intelligence. Circling around, she located the source of the commotion. The biped was being attacked by the fanger and had obviously been driven to the limit of its poor capacity for self-defense. It lay near the ship, helpless, ripped, and bleeding, as the beast advanced for the final blow. Automatically, she took aim and fired.

The fanger reared up and howled, then crumpled to the ground, shuddered once, and expired.

She ran to the biped, forgetting all caution in the exultation of discovering another intelligent being -- for the strange craft must have been its means of arrival in this isolated place.

He was curled in a ball and unmoving. She gently prodded and pulled at him, examining his wounds and feeling for pulse points. Finally locating a weak throbbing in his neck, she began to attend to his major injuries, hoping that her ministrations would prove correct. Having done everything which seemed reasonably possible, she sat back and waited.

Twilight had begun to deepen into night and still he had not stirred. She shivered in the sharpened coolness and jumped nervously when an animal cackled in the nearby undergrowth. Knowing she must take cover for the night, she decided to attempt a move into the uncertain security of his ship. In searching for a point of entry, she noticed a scorched, fused strip on the ship's skin. The blackened seam began about a third of the way up one side and continued to the "top." It was as if the ship had been struck by lightning. She located an opening.

Inside was a spacious compartment -- curving walls lined with unfathomable instruments, many of which emitted a soft, luminescent glow. The floor was smooth and warm and faintly pulsating. Marveling, she gazed about, afraid to touch anything but consumed with curiosity. Then she remembered the occupant of the vessel and hurried out to see how she might contrive to move him inside.

He was surprisingly light, so she ended up dragging him in and parked him in the middle of the circular floor. Securing the

hatchway proved confusing, but she finally figured out the mechanism and wound it shut.

Her patient abruptly stirred and muttered, making thick, smacking sounds with his mouth. She cast about for some form of liquid to administer and found some little, oddly shaped, soft containers which gurgled and sloshed when shaken. Pressing on one produced a hissing sound at the tip. Clumsily, she removed the little cap which covered it and a rank, brownish liquid squirted out in her face. She hastily released her grip and then stood, transfixed, as a drop of the substance trickled down her nose and into her mouth. There was a burst of clamorous sound and acrid flavor which receded into a faintly sweet, lingering aftertaste and soft, harmonious humming, producing a most stimulating effect. She gazed down at the container, which she had dropped. She picked it up and went over to the biped. After a moment of hesitation, she knelt and carefully squeezed a drop of the liquid onto his tongue. He rolled his eyes and sighed, softly, but lapsed back into stillness. Then she squirted a little stream into his mouth and stood back to observe its effect. His response was instantaneous and violent. He jerked up to a sitting position and shrieked unintelligibly, flailing about with his arms and then covering his ears with his hands and huddling down with his head between his legs. Finally he lay back, gasping, but fully conscious and evidently unharmed. He seemed to take in his surroundings with some surprise and obvious relief, then his gaze fell upon her and she tensed and drew back in sudden apprehension. But he just murmured something and held out a pale, slightly shaking hand in a strange gesture.

Slowly, she approached him. Having ascertained that he would not grab at her, she knelt down beside him and studied his ugly face. The eyes creased around the edges and his thick lips parted and curled, revealing the curious protuberances within. She blanched and drew back again, but calmed when he uttered a low, soothing sound. Then he closed his eyes and groaned and she noticed he was trembling. She searched the compartment and found a length of soft, pliant material. She covered him with it and he grimaced oddly at her again, then slept.

She woke in confusion, startled by a sound, and quickly oriented herself. He was gone, and she realized that the sound of the hatch closing had awakened her. She ran to the entry, suddenly fearing she had been made prisoner for some dark purpose. To her relief, the hatch opened with no resistance and she ventured out into the morning sunlight.

He was sitting with his back against the hull of the ship. When

he saw her, he pointed at the fanger's carcass and babbled gutturally, his head waving back and forth. She stared at him, uncomprehending, then demonstrated how she had slain the beast. This was accomplished at the expense of one of the more distasteful of the local fauna whose misfortune it was to be scuttling about at the edge of the clearing.

He weakly made his way over to the fresh kill and examined it, then proceeded to gnaw hungrily at the remains. She looked away in disgust. However, she realized her own hunger, and satisfied it with provisions from her pouch. He watched, with interest. She proffered a morsel of food and he took it, sniffed gingerly, grimaced, and handed it back. She shrugged and tucked it away for later consumption.

The rest of the day was spent in cautious diplomacy. His condition was clearly debilitated, but improving, and he ushered her about the ship as best he could, gesticulating and articulating in an obviously eager attempt to communicate. His ship was full of wonders and inscrutable gadgetry, yet she began to grasp some of the implications of its alien design.

Catching his attention, she spread her arms as if to encompass the entire craft, then pointed toward the sky, indicating flight. He waggled his head and pointed in turn at an indicator of some sort, then continued the tour of the ship. She followed in disapointment but soon became absorbed in the many fascinations he displayed.

When he paused to rest, she considered the full significance of their meeting and realized that, despite his repulsive countenance, she was glad for a companion. The better part of her fear had vanished and the reprieve from involuntary solitude was welcome, indeed.

They established a tentative alliance and, when his strength had returned, she took him to her ship. He was fascinated with it and spent quite some time curiously poking around and intently taking in the information she was able to relay in the sign language which they had developed. Sometimes she wondered if he understood half of what she attempted to communicate.

Their preoccupation with the consequences of mutual discovery was abruptly cut short by the onset of the extremely cold season which she had anticipated. Pooling their resources was, by now, an expedient so spontaneously adopted that it seemed always to have been inevitable. They worked ceaselessly, gutting her vessel of all useful items and transferring the store of food which she had been accumulating to his larger, tighter ship.

She learned to hunt for his provisions, scouring the

increasingly barren countryside while he worked on and about his ship, making ready for the siege. He seemed more susceptible to extremes of temperature than she.

But the day came when even she could not bear the cold for long. She arose one morning and made her way to the frozen stream to bring back ice for water, as was her habit.

In her haste to return to the warmth of the ship, she lost her footing on the icy bank and rolled, scrabbling frantically for a handhold, onto the frozen surface. Her head glanced sharply against a boulder jutting out of the ice, and she lay still. Liquid oozed from a gash on her temple and gradually slackened in its tracks, forming a hard, dribbly course of crystalline drops.

He slept on.

Cold ... head aches ... anxiety ... where am I?

Open one eye ... the cabin wall ... just dreaming. Sink back into oblivion ... safe, warm ...

... no, COLD ...

He sat up and sleepily looked around. He was alone -- she must be out getting water.

Time to get up anyway. Have to try and reseal that crack in the foremost bulkhead for better insulation ...

He crawled over to the cache and fished out a strip of dried meat. As he chewed, unenthusiastically, he allowed his mind to wander, breaking the palatal monotony. The flavor of the meat reminded him of his first taste of tassedon.

Hard to catch, those little beasts ... Good thing she had that cathecter or I might have starved. Funny ... I used to think she looked so hideous ... not now ... Guess I was just feverish. Weird creature, though ... but better company than none. Pretty good, in fact. Wonder if she's still afraid of me? Don't think so -- but I'd best go slow ... she's so nervous ... and I never can tell what she's thinking ... If only we could talk ... Guess I'll just have to keep trying ... Oh-h-h!

His reverie was interrupted by an insistent throbbing in his left temple. He rubbed it curiously and concluded that he must have bumped against something while sleeping.

He got up and went to the hatch, opened it, and looked out, shivering in the onslaught of frigid air.

No sign of her.

His pulse started to race as he began to consider the possibility of trouble. While preparing to go in search of her, he realized that his desire to act went beyond simple concern for someone in need of help. He paused in surprise, perceiving the full impact that her presence had had upon him.

Wrapping himself as best he could against the penetrating cold, he hurried through the hatch and staggered toward the stream, bent double in the pounding wind.

By the time he got to the bank, he knew he'd never make it back to the ship. He stumbled to the edge and squinted up and down the length of the stream.

He found her and managed to pull her stiff body up off of the ice. Bowing under the weight, he hauled her on his back, trudging blindly in the direction of the ship.

He fell to his knees and continued to crawl, dragging her along.

It couldn't be far now ...

He ceased to be conscious of the cold.

She burned all over ... it was agony to breathe.

Her head was lifted and the silken edge of a pod touched her lips. Warm liquid trickled down her throat and spread out into her aching extremities.

She slept.

His face was close to hers. He crooned and held her in his arms. She inhaled deeply, savoring his fragrance, then reached up and touched his cheek with three amethyst fingers.

He spoke to her and she mimicked the sounds softly, *"m-m-mit arsann, oo-shane."*

He chuckled. "You're learning, honey." ●

FANTASTIC FACTS

The stars are not immortal; they grow old and die when they have consumed all their nuclear energy.

A "Black Hole" is such a star, a massive one that has collapsed inward with a force of gravity so overwhelming that matter, radiation and even light cannot escape its pull. It can't possibly shine and hence the name.

All are spherical. Some consist of millions of tons of matter squeezed into a space *smaller than an atom.* Others may be as much as four miles in diameter.

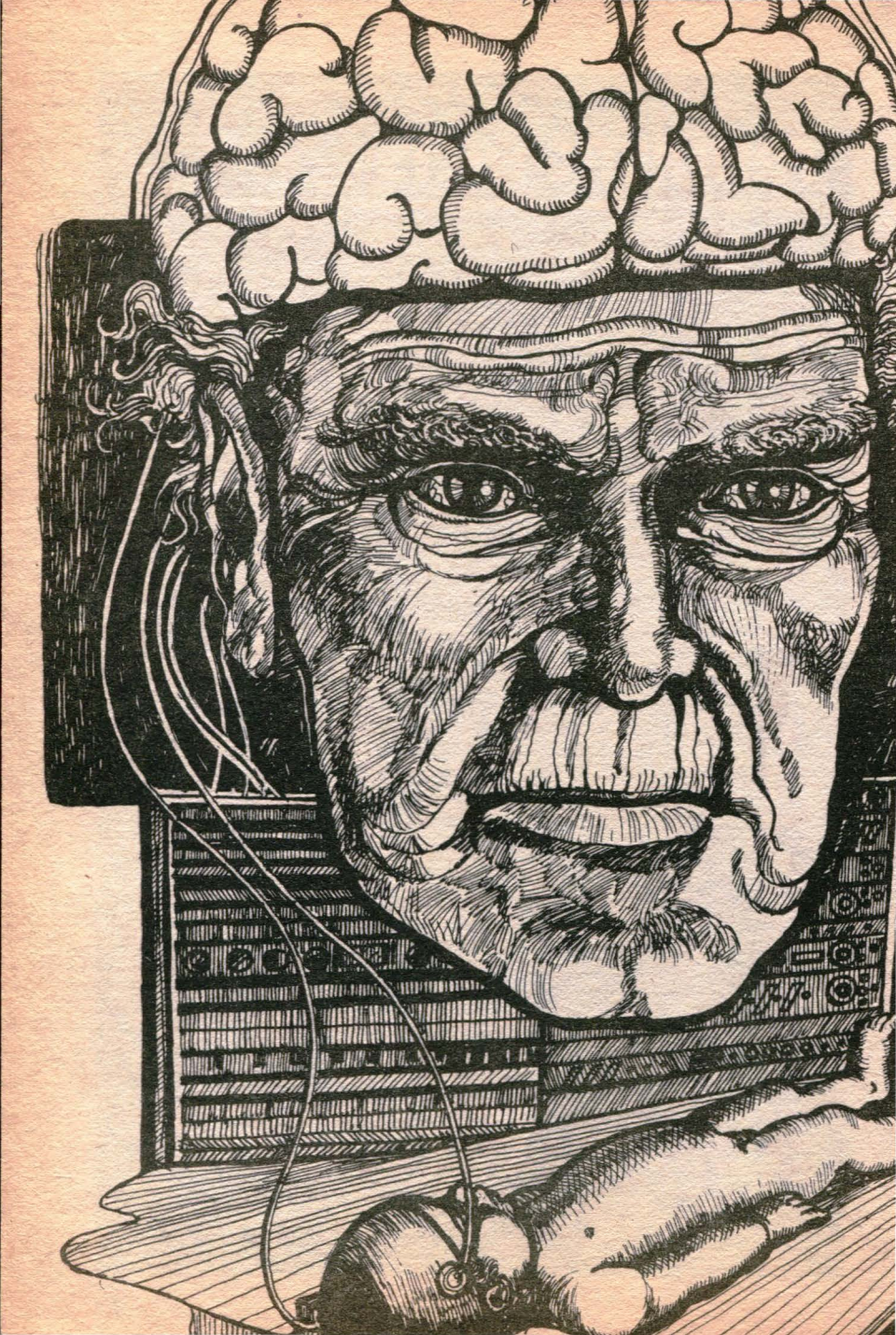
Many physicists fear that black holes may eventually explode with the force of many H-bombs. Others guess they may last billions of years and never explode.

A black hole has no molecular, atomic or nuclear structure. Gravity has literally crushed matter out of existence. It is surrounded by a frontier called an *absolute event horizon.* Nothing that crosses the event horizon can ever return.

Science fiction writers and even scientists speculate on the possibilities of a black hole being an opening into another universe. They also toy with the concept of "wormholes" in a black hole's equatorial plane through which instantaneous travel might be possible.

A black hole curves surrounding space and puts brakes on time. In fact, the fundamental laws governing the universe appear to be destroyed. This challenges many of man's basic ideas about his surroundings and his place in them.

WHAT IS A BLACK HOLE?



INTELLIGENCE UNDYING

by Edmond Hamilton

How would you like to live forever? Or have at least a part of you live forever? Naturally, the world would be lucky to have you around so long, you being so loaded with smarts, and all. But maybe everyone would come to depend too much on your venerable and constant support. Would it be a blessing or a curse? Can there be too much of a good thing? Read on.

THE young chemistry instructor, chatting with two fellow-teachers in one of the halls of Mid-western University, had no notion that his next words were to change all human history to come.

It was in the most casual of conversations that he spoke, nodding toward the stooped, elderly, gray-haired man who had just limped past them in the hall.

"Doctor Hanley looks pretty feeble lately. I expect his work is about done—too bad, too."

"Then he added with more liveliness, "Say, did I tell you how I made out in the poker game last night?"

"That young man never dreamed what he had done. He never even knew that Doctor John Hanley had heard him.

Nor did anyone else know until on a night some weeks later, young Edwin Shaw visited the elderly scientist.

There was a curious friendship between the old and the younger man, between the world-renowned biophysicist who was supposed to think only of his work, and the quiet, modest young instructor in English literature.

Everyone else at Midwestern was awed by Doctor Hanley's great reputation. His infrequent lectures were listened to with bated breath by students striving to understand. Even the President of the University approached him with the deference due to a superior.

But young Snow had come to Midwestern and had seen what the others had failed to see, that in spite of all his eminence Doctor Hanley was a lonely old man. So he had disregarded the scientist's fame, which indeed Snow's unscientific mind could not appreciate, and had made overtures of simple friendship. In a few months he was Hanley's closest, almost his only friend.

At least two nights a week the gray-haired, impatient-faced and acid old scientist and the spectacled, smiling, easy-going young instructor sat in Hanley's house, and smoked and talked till midnight. But on this night Doctor Hanley was different. He stared for a while at the younger man from under his gray brows, and then spoke abruptly. "Snow, you know I've been busy lately on private research. Tonight I'm going to tell you what I've been doing."

The young English teacher took his pipe from his mouth. "If you like. The chances are I won't understand you anyway."

"I'll make you understand, all right," the scientist said a little grimly.

He hesitated a moment, then spoke more slowly. "Snow, a few weeks ago I heard someone, a young fool over there at the University, say something about me that brought me up short.

"It suddenly made me realize what I never realized before. It made me realize that my life, my work, are practically finished."

Snow looked at him with more attention. "I wouldn't let a few chance-heard words upset me if I—" he started to say.

Doctor Hanley interrupted forcefully. "I tell you, it's true. I never realized it before, I couldn't realize that life could be so short, but it's so."

"I'm almost seventy now. The physicians I went to told me that my heart may pop out any time, that I have only months at best. It's all over, my life, my work, the work I planned to do in the future, all over, finished."

He stared broodingly into the fire, his hard eyes dreaming.

"That a human life can be so short! Why, it seems only yesterday that I was your age, starting to work. Just yesterday!"

"The things I've planned to do, the problems I've always meant to solve, the secrets I've meant to discover!"

He made a harsh movement with his hand. "And now it will never be done. It's taken all my life really to learn the fundamentals of my science, to get the tools and skill to do great things, and now when I'm ready at last to do them, this miserable body of mine fails me and it's all lost."

"Edwin Snow nodded, his eyes deeply sympathetic behind his glasses. "It has always seemed hard to me that we should have to die just when we have at last learned to live," he said.

"I'm not thinking of myself, not of any individual," Doctor Hanley declared. "It's man, the race, I'm thinking of.

"Snow, have you ever stopped to think what progress might be if we did not all have to spend half or more of our lives learning what the world already knows?

"Suppose a child were born into the world knowing all that I now know? That child would not have to spend years learning things already known, but could go on from present knowledge; he could spend all his life contributing to new knowledge.

"Think of the discoveries he could make, the problems he could solve! He could go deeper into the mysteries that confront us than any man has ever been able to do."

Young Snow's whimsical, pleasant face wrinkled in thought. "It's certainly an attractive fancy." he said.

Doctor Hanley was silent for a few moments, eyeing the younger man strangely.

Then he said, "It's no fancy, Snow. I'm going to do it."

"What?" The young instructor was startled out of his usual easy-going calm. "Going to do what?"

"I'm going to transmit my intelligence, my memory, my mind, to a newborn child's brain," the scientist answered.

Edwin Snow looked so earnestly at him that despite his seriousness, Doctor Hanley smiled bleakly.

"No, my wits aren't turned. I'm really going to do the thing. I've been working on it these last weeks, ever since I realized that my life was almost over.

"I said to myself, 'If I could just transfer my mind, my knowledge, to a newborn child, *he* could go ahead and do all the things I won't live to do, without having to waste time learning. And I've found a way to transfer my mind like that."

"But how—what—," the now thoroughly amazed Snow began to stammer when a wave of Hanley's hand cut him short.

"It's simple enough at bottom, though it has entailed the devising of wholly new principles of apparatus."

He leaned forward. "When we come into this world, Snow, our minds are a blank sheet except for certain reflexes which we all inherit. But from our birth onward, our minds are affected by all about us, our reflexes are conditioned, as the behaviorists say. All we experience is printed on the sheet of our minds.

"I will try to explain to you how this is done. The seat of the human intelligence is in the cortex or outer layer of the cerebrum, which is the upper and bigger part of the brain. The cortex consists of a vast number of gray nerve-cells or neurones, some concerned with sight sensations, some with taste sensations, and so on.

"When someone gives you a strange fruit and you first look at it, the sensation passes from your eye retinas up the optic nerves to the group of sensory cells in the cortex that receive visual impressions. Then when you bite the fruit a sensation of pleasant taste is transmitted to the taste-cells of the cortex, and thereafter between sight-cells and taste-cells a certain individual connection is thereby formed.

"Because of that connection, the next time you look at such a fruit the stimulation of your sight-cells will continue along that previously formed connection and will stimulate the sensation of pleasant taste in the brain's taste-cells. In other words, merely looking at the fruit this time will cause your brain to feel a sensation, an associated memory, of pleasant taste. For the first experience established a definite physical connection between certain of your visual and taste neurones, and that is what you mean by saying that you *learned* that the fruit tastes good.

"In the same way that you learn to *know* things like that, you learn to *do* things. The first time you perform some action requiring skill, it is hard to do, because the connections between

the brain's neurones which receive sensations and thus see what to do, and those which issue commands to the muscles to do them are not well formed. But each time you perform that action the connections between the sensory neurones and motor centers are better formed, and so you soon perform the action without conscious thought, so well are the connections formed.

"Everything a human being learns, therefore, simply establishes new connections between the nerve-cells of the brain. There are millions of nerve-cells in the cortex of the cerebrum and therefore you will see that the different connections and combinations between them are infinite in number. No two people ever have exactly the same combinations of connections between their neurones, which is to say that no two people ever have exactly the same mind, memories, and knowledge.

"As is said, a newborn child has no such knowledge connections in his cortex at all—he has not yet formed any. Now if I take that child immediately after birth and establish in his brain exactly the same web of intricate neurone-connections I have built up in my own brain, he will have exactly the same mind, memories, knowledge, as I have. He will remember everything that has happened to me, everything I have ever learned, have ever done. He will not be I, yet his mind will be exactly identical with my mind!"

Edwin Snow's pipe had dropped from his hand and the young instructor was staring at the scientist with protruding eyes.

"Do you mean that you can do *that?*"

Doctor Hanley nodded. "I can. I've devised a way to *scan* my brain's intricate web of neurone connections by electrical impulses, and by means of those impulses to build up an exactly identical web of neurone connections in the infant's brain. Just as a television scanning-disk can break down a complicated picture into impulses that reproduce the picture elsewhere."

Snow got to his feet, staring at the old scientist in an ill-concealed species of horror.

"But what child—"

"That's all arranged," waved Hanley. "Plenty of infants are born in this city each year whose mothers don't want them.

"I've arranged for such an infant to be given to me as soon as born, a white male child. I will adopt the child legally and as soon as it is here I will transfer my mind to it.

"You understand, this experiment means death for me, physically. The shock of those searching electrical impulses in my brain will without doubt kill me, in my present feeble condition.

"But the counter-impulses, that build up my neurone connections in the child's brain, will not harm him. And his mind will at once be the same as mine. Even before he can walk or talk, he will have all the knowledge and memories that I've amassed."

"There's something unholy about it!" burst from Snow. "To put one of the greatest scientific minds in the world, a mentality with a life-time of experience behind it, into a newborn child!"

"Man, can't you see what it will mean to the world!" exclaimed the scientist passionately. "Can't you see what John Hanley 2nd, will be able to give the world? He won't have to waste time learning but will go on from where I'm leaving off.

"And not only he, but others beyond him. When his life nears its end, he can pass on his mind, *my* mind, to another child to John Hanley, 3rd. And that infant will become possessor of all the mental power build up in two lifetimes.

"Why, it can go on and on, my mind passing down from generation to generation, growing and growing, giving to the world gifts of power of which it does not now dream. An undying intelligence that grows ever greater!"

His eyes flamed with the vision. Then almost complacently he spoke to the dazed young man.

"You're to have part in this too, Snow. I'm naming you as guardian of John Hanley 2nd, in my will, to care for him, for *me*, after this body of mine is dead."

Edwin Snow shook his head, that horror still strong in his eyes.

"I'm not sure that I want anything to do with the thing at all, Hanley."

Yet two weeks later Snow was in the scientist's private laboratory, when Hanley, wire-taut with excitement, prepared to effect the incredible transfer of his mentality to the new-born baby an ambulance had just brought to the house.

On a prepared table Hanley placed the scrawny, squalling red baby. Beside it was another table, and at the head of the two tables was a metal stand bearing a squat, enignatical bulk of apparatus. Tentacles and cables joined it to other mechanisms in the room, pulsing tubes in it glowed violet through slits in its metal cover. From it led two insulated wires that each ended in a metal cap, one of them twice as large as the other.

Rapidly, gently, Hanley placed the smaller metal cap upon the head of the now dozing infant. Without speaking he laid a pencil and pad beside the child, then climbed upon the other table and adjusted the larger, metal helmet on his own head.

He reached for the controlling switch. "Remember, Snow," he

warned, "you are not to touch the apparatus no matter what happens. It is set to turn itself off automatically at the proper time."

"Snow swallowed, nodded, unable to speak. Hanley suddenly smiled at him. "Goodbye, Snow. Or should I say—*au revoir?*"

He threw the switch. The mechanism on the stand hummed loud, and instantly Hanley sank back, his eyes closing.

The child too lay in stupor, breathing slowly. Edwin Snow watched them, conscious that he was trembling.

The incredible apparatus hummed on. Minutes passed, that seemed eternities to the watching teacher. Then a red light winked somewhere inside the apparatus and its humming abruptly died.

Edwin Snow bent hastily over Doctor Hanley, examined him with trembling hands. Even to his untrained eyes, but a moment was needed to show that the scientist was dead, his gray face set and cold.

Young Snow turned toward the infant. And as he did so, the child opened its eyes.

It looked up at him, steadily, and at the gaze of those strangely steady, brown eyes, Edwin Snow shuddered.

The child had such an expression in its eyes as he had never before seen in an infant's. Slowly, steadily, it turned its little head until it could look at Doctor Hanley's dead form.

Then its tiny hand moved uncertainly until it reached the pad and pencil beside it. With the preternaturally strong handgrasp of a newborn child, it clutched the pencil in its fingers.

The little hand moved awkwardly, the pencil scratched slowly, unsteadily, over the surface of the pad. Then it released the pencil. Mechanically Edwin Snow picked up the pad, and as he read the crudely scrawled, almost indecipherable letters, he uttered a shuddering sob.

"I-T W-O-R-K-E-D, S-N-O-W. E-V-E-R-Y-T-H-I-N-G'-S A-L-L R-I-G-H-T A-N-D M-Y M-I-N-D I-S J-U-S-T T-H-E S-A-M-E."

John Hanley—John Hanley 21st—stood in taut attention beside a beryllium table upon which two beams of concentrated electrical force played upon a tiny speck of bismuth. In body, John Hanley, 21st, was a thin, bald man of middle age, with a severe mask of a face. But the blue eyes in that face were astoundingly in contrast to the rest of it, impatient, keen pene-

trating eyes, fixed with sword-like intensity on the bismuth speck.

Suddenly the silence of the silvery-walled, sunlit laboratory was broken as a door opened.

A young man entered, one clad like Hanley in a short white tunic and sandals. His dark, mobile young face was excited.

John Hanley turned in amazed indignation. "You, Kriss? You dare to enter without summons?"

The young man's features expressed utmost respect struggling with uncontrollable excitement.

"Your pardon, master, I know I break the rules. But something has happened."

"Well, what is it?" Hanley demanded impatiently. "What's gone wrong now?"

Kriss pointed toward the silvery west wall of the laboratory. "Master, rocket-ships are fighting up there in the sky, many of them! They look like Northern and Southern battleships."

The scientist's blue eyes were incredulous. "Ships fighting—war—in this year 3144?" he exclaimed. "Impossible! There has been no war between the two great Federations for twelve centuries."

"Yet they are fighting now," Kriss persisted. "You can see from the balcony."

The scientist hesitated, glancing at the experiment on the table. "To leave now when I'm on the very verge of at last releasing atomic power—but yet, I must learn what is happening."

He reached abruptly and moved levers, and the twin electical beams died. Then he strode toward the door.

He went, the obsequious, excited Kriss following closely, through splendid, silvery halls and connecting laboratories deserted now of their occupants. He emerged through a door into sunlight, and thin air of biting chill.

It was a small balcony, on which were a score of young men clad like himself and his follower. The balcony jutted from the edge of an oblong, flat-topped structure of silvery metal. which housed the laboratories of the world's greatest scientist.

This silvery parallelopipedon was perched sheer on the edge of a great cliff and looked out over scores of soaring, snow-crowned mountain peaks and vertical, black chasms. John Hanley, 21st had established his laboratories here in the great peaks of the North American Rockies where he would be far from the interferences and annoyances of the teeming cities that benefited by his discoveries.

John Hanley strode through his respectful young servants on

the balcony and stared with them into the western sky.

There above the distant peaks hovered a boiling ball of whirling black specks that shot tiny jets of white fire at each other.

John Hanley snapped an order and swiftly a stubby-looking telescope was brought, through which he peered at that distant aerial conflict.

He turned from the instrument in a moment, his expression one of shaken incredulity.

"Northern and Southern ships fighting there, yes! This means that war has broken out somehow between the Northern and Southern Federations."

His face flushed angry red. "The fools, the blind fools!" After I've worked a thousand years and more to give them greater and greater powers, and they use them—"

He broke off, turned toward the uncomprehending, listening young men.

"You who are my servants, is your allegiance now to me or to the Federations from which you come?" he asked them.

Kriss answered for them all. "To you, of course, master! Did we not all swear to execute all your commands, to become the hands and limbs by which you would carry out your work?"

"Very well!" Hanley approved. "Quick, then, there is work for you to do before any of those ships get here. Yes, some of them will be here, whichever manage to destroy the others."

His rapid orders sent the young men running into the laboratories. Quickly they began assembling a strange and bulky mechanism.

They knew not what it was they were building, had no slightest comprehension of what lay behind their master's orders. It was enough for them that he so ordered. His was the brain and they were but extensions of his limbs.

Thirty minutes later the work was finished and John Hanley, 21st, stood with his servants on the balcony and watched the two surviving rocketships approach. He and the young men now wore curious circular shields of metal over their ears.

The two fish-like battleships came on fast with thudding rocket-blasts, and the crossed arrow of the Northern Federation could be discerned on their prows. They were the victors and the only survivors of the fight. They landed on the roof of the silvery building and down upon the balcony came a little troop of men from them.

These men wore blue harnesses over their tunics and flame-tubes at their belts, and their faces still flamed with light of

battle. But their leader bowed with deep respect as he faced the chill, immobile figure of the scientist.

"Sir we are of the Rocket Fleet of the Northern Federation and have been sent to protect you," he said rapidly. "War has been declared between the two Federations."

"We met a Southern force bound here, no doubt to abduct you, and, in destroying them, all of us but two ships were also destroyed."

"What are your orders regarding me?" John Hanley, 21st, asked coldly.

The Northern captain's eyes flickered but he did not lose his attitude of deep respect.

"We are to take you for your own protection to the Capitol, sir. There you will be housed in safety and comfort befitting the world's greatest scientist."

"Safety and comfort," repeated John Hanley bitterly. "What you mean is that you're taking me so that I will invent weapons for you to destroy the Southern Federation with, weapons that will depopulate half of the earth.

"And the Southern Federation had the same idea and sent ships here to get me, only they didn't send quite as many as your headquarters did.

"I thought that after all the great gifts that I and my predecessors, twenty other John Hanley's, made to the world, the comforts and powers we gave it, it would have forgotten this ancient madness of war as I had forgotten it.

"I see now that I was wrong. You've taken all the things I gave you, and all the time you've kept plotting to murder each other. And to make me part of that wholesale murder!"

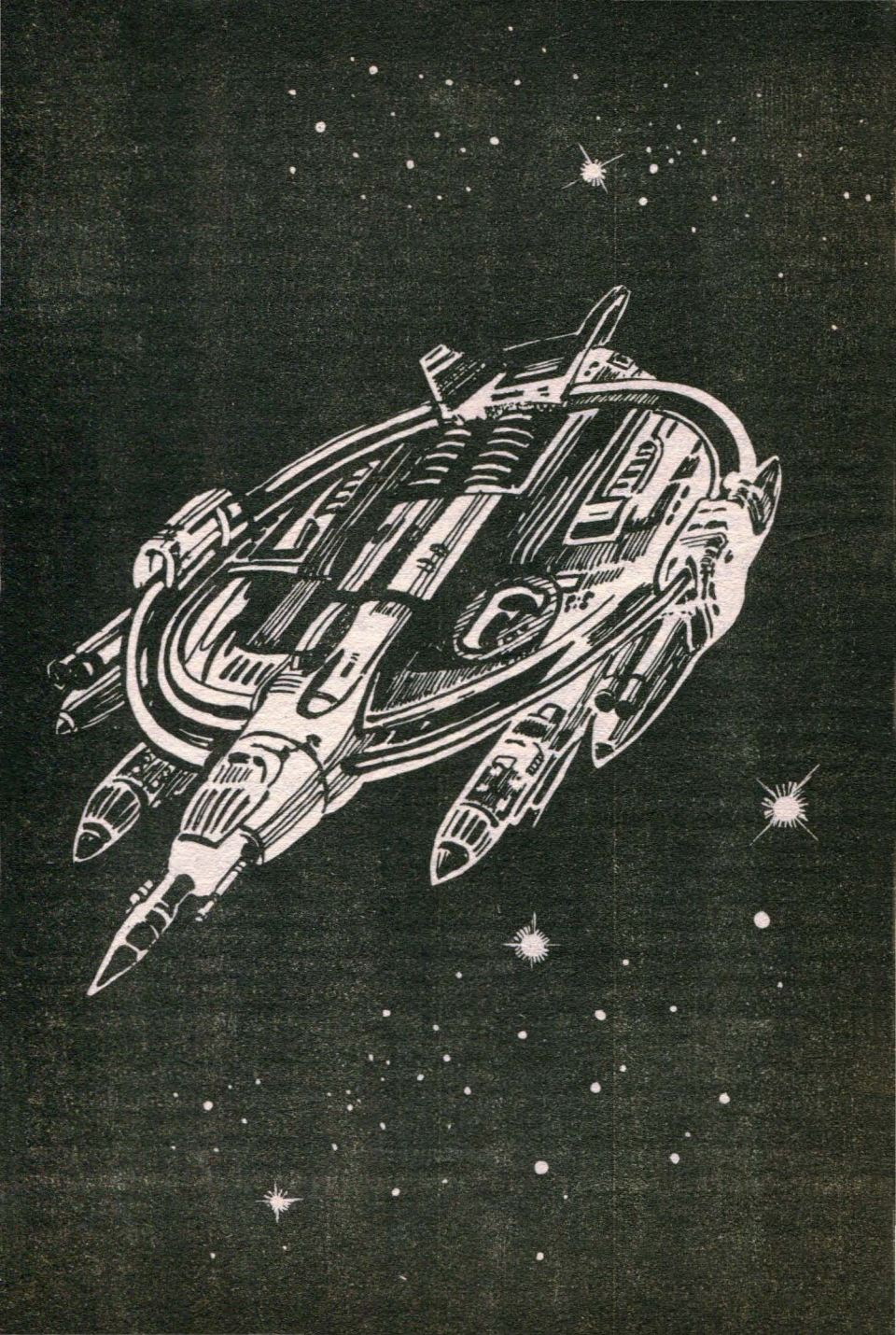
The captain, looking a little doubtful of his own temerity, stepped forward and laid his hand on the scientist's shoulder.

"I am sorry, sir—but my orders—we must go now—"

Without moving from where he stood, John Hanley, 21st, pressed the switch at the end of a cord running along the balcony rail.

Instantly the Northern captain and his followers swayed and staggered, pitched wildly into each other, losing their balance and falling on the silvery floor of the balcony.

They cried out as they fell, and one got his flame-tube out and loosed a random burst of white fire that angled sharply up and struck John Hanley's side. The scientist pressed his hand to the scorched spot on his side, and meanwhile his young servants, like himself unaffected by this staggering madness, leaped forward and disarmed the soldiers.



John Hanley 21st looked down at the fallen men, who were struggling vainly to get to their feet. Each time they raised themselves a little they overbalanced and fell again.

The scientist said icily to them, "You begin to comprehend that I, who have given you almost all the powers you possess, have powers still of which you know nothing."

"What—what have you done?" gasped the captain, easing his vain efforts to rise.

"Something that you could hardly understand even when I tell you, you who are content with the rest of the world to receive all *your* scientific discoveries from my brain," said Hanley.

"In there in the laboratories is a machine that broadcasts sounds, sonic waves inaudible to your ears or any human ears because their wave-lengths lie outside the range of human audibility. And those sonic waves violently disturb the semi-circular canals in your inner ears.

"You do not know, you who think only of killing, that inside the human ear lie three little semi-circular tubes or canals containing liquid, and that by the position of that liquid in the canals the body can tell when it stand erect and when it leans, and so is able to balance itself enough to walk and stand and sit.

"The sonic waves I am broadcasting disturb the liquid in those canals and so you cannot stand or walk. And these continuous waves of mine are passing around the whole globe, and nowhere on earth now can men, except those with me here, stand, not any more than you can."

He uttered a word and one of the servants hurried out with a televisor screen. John Hanley 21st touched its pointers and scene after scene appeared rapidly on the screen.

Cities appeared on it, great metropolises of bedlam in which the steets were choked with stumbling, crawling people, none of who could stand erect.

Mighty rocket ships were seen driving aimlessly through the sky, their officers unable to stand up to their controls.

The world had suddenly lost man's achievement, the ability to stand erect.

John Hanley 21st spoke into the instrument, his voice strangely level and emotionless.

"People of the Northern and Southern Federations, men and women of earth, it is I, John Hanley 21st, who have loosed this staggering terror on you.

"For long I have given you power and now you would use that power to make war on and destroy each other. I see now that not only must I drag you upward in material progress but that I also must rule you.

"Therefore I now assume rule over you and I will appoint those who are to execute my commands. My will shall be law from now on, and nations are no more. Leaders of the Federations, do you agree?"

From the instrument came the gasping, confused answers of dozens of voices, terror-filled. "We hear! We agree!"

"Then obey my first command, which is to cease immediately all war and preparations for war."

"My second edict is that in case of my death he whom I shall designate as my heir, as John Hanley 22nd, shall be obeyed by you all, as I am."

He snapped off the instrument and then touched the switch at the rail. From the instrument came a world's choked cries of relief.

John Hanley faced the dazed, unsteady captain and his men, who had risen to their feet.

"Your ship is fast," he said. "Go instantly to the nearest city and bring back a newborn male child. Hurry!"

As the rocketship roared away, the scientist's servants sprang to his side. "You are wounded, sir!" they cried.

"Never fear, I will live until that ship returns with a child," John Hanley told them inflexibly. "Help me inside."

They assisted him into his own innermost laboratory and there, at his command, they laid him upon one of two tables, placing beside them a squat, bulky apparatus which he ordered brought from a cabinet.

He lay there silently until the drumming blasts of a rocketship came to their ears from outside. A few moments later the Northern captain entered hurriedly, a carefully wrapped burden in his arms.

"The child, sir. It is a new born one we got from the nearest State Nursery."

"Put it on this other table," John Hanley, 21st, directed.

Then he raised himself a little. "I name this child John Hanley, 22nd, and my successor. Do you all hear?"

"Very well. Now all of you go away."

"But, sir, we cannot leave you now when—" they cried.

John Hanley pointed to the door, and they went.

With feeble hands John Hanley adjusted the two metal caps of the apparatus, one on the infant's head and one on his own.

He examined with dulled eyes the connections, saw that all was correct, and then put his hand on the switch.

He smiled at the infant. Another body, another life, for this undying mind of his. The atomic power — he wouldn't complete

that in this body, but his mind would do it in this child's body. John Hanley, 22nd, would go on and do it.

He was going to die but his mind, his experience, his knowledge, would not die but would still live on for the world. Still with the smile on this tired face, John Hanley, 21st, closed the switch.

John Hanley 416th — or the Great Jonanli, as he was worshipped by the humans of this year 22,918 — sat in his spherical metal observation chamber a thousand miles inside earth's crust.

It was a violet-lit globular chamber, two thousand feet in diameter, crammed with scientific instruments that would have been unintelligible to any other man on earth. It lay here at the bottom of a shaft bored down through the rocks and soil and magma.

In it John Hanley, 416th, had been for many months investigating the interior stresses of the earth. He needed no sleep or food, only the necessary fatigue anti-toxins and nutrition injections which he had devised for himself.

Bodily, he was extremely small and slight, not much over four feet in height, his limbs smoothly rounded, his face almost effeminate in its prettiness. Only the spark in his pale blue eyes showed the vast force of the mind that dwelt in this slight body.

John Hanley rose from the bank of cryptic dials and quivering needles, which he had been examining for many hours.

He stretched a little, and looked at a chronometer on the wall.

"Eight months," He muttered. "Better see if all's going well up there."

Passing contempt showed itself on his face. "They'd never know or care if anything did go wrong, the way they leave everything to be done by the Great God Jonanli."

He turned toward the screens and dials that connected this subterranean observation chamber with his many other observation chambers on earth's surface.

Rapidly as John Hanley touched switches, he was connected visually, auditorily and tactually to those other chambers.

Some of them gave him views of great, sunlit garden-cities. In these beautiful park-like scenes many throngs of women and men, small of body and graceful and pretty as himself, were wandering, laughing, playing games.

John Hanley eyed them for but a moment before switching to other stations. These gave views of large factories and workshops, built in uninhabited regions remote from the garden-cities.

Huge, automatic machines worked in them in an ordered wild-

erness of complex metal, turning forth all the necessaries of life and transporting them, without need of any directing human hand.

From other stations colossal electrical mechanisms could be seen controlling the weather, keeping temperature precipitation and humidity at unvarying constants without any human supervision.

Still other stations gave him a view of underground and undersea mines, all machine-operated. Everywhere were automatic recorders that told him at a glance the progress of the last months.

Satisfied, John Hanley switched to screens in his laboratories on the surface, all enclosed in a colossal cubical building that was the sacred Temple of Jonanli. There too recorders told him the progress of certain slow processes being tested in his absence. There too all was done by machinery, and none of the graceful humans were visible.

The last shift of scene brought his vision into an astronomical observatory where a great battery of flat, disk-like electrocinema telescopes peered unceasingly at the heavens, slowly moving on their mounts. He examined the visual and spectroscopic records of these.

Suddenly, down there in the sphere a thousand miles under earth's surface. John Hanley started violently. He quickly shifted a control and ran through a section of the astronomical record again.

Then he cut off the instrument and stood for a brief time plunged in thought. Quickly the spell broke and he entered a short, torpedo-like projectile attached to the top of the sphere. He closed its doors, atomic power hissed from it, and it flashed up the vertical tunnel toward the surface of earth at great speed.

At the surface, he emerged directly into the Temple of Jonanli and went at once to the astronomical observatory. He turned certain cumbersome instruments toward the sun.

Two hours later the view-screens in the garden-cities all over the world rang out a certain signal. It was the sacred call of Jonanli and quickly, hurriedly, the people of earth flocked to the nearest screens and waited.

They bowed themselves in deep reverence as the face of Jonanli himself appeared in the screen.

"My people," John Hanley addressed them from his observatory, "a great peril has come upon us.

"Our sun, which you, who know nothing of science, no doubt consider unchanging and eternal, is only a star like any other

star. And it is about to undergo a change that in time occurs to all stars.

"Every star gets the energy it radiates by the breakdown of electrons in its own atomic structure. This continues until the atoms of the star have been so stripped of their planetary electrons that they can be packed together in exceedingly smaller space than before.

"When this condition reaches a certain stage, the instability of the star is so great that it collapses suddenly into a white sun only a fraction as large as the original sun. It becomes what was once called a "white dwarf" and thereafter gives off only a tiny fraction of the heat and light it formerly radiated.

"I have just discovered that our sun is about to become a 'white dwarf.' In a short time this thing is going to happen to our own sun, and thereafter our earth will receive so little heat and light that it will become a frozen planet on which nothing can live."

There was stunned silence and then from the view-screens came back to him a tremendous, wailing outcry of terror.

"Save us, Jonanli! Save us from this death that comes upon us!"

"I will try to save you," John Hanley told them impatiently. "But you too must help. You must act like men.

"Panic will do you no good. There is but one course open for the race, to move to Mercury which is so close to the sun that it, alone of the planets, will be inhabitable and warm after the sun's collapse.

"It will first be necessary to prepare Mercury for human habitation, and then to move all of you there. There is small time to do this, but, if all help, it can be done. For the first time, Jonanli asks your help. Will you try to aid in saving yourselves?"

The only answers were cries of increased terror. "Have mercy on us, great Jonanli! Do not loose this death upon us!"

"We have been wicked, we have not sufficiently worshipped you! But do not destroy us now."

"But I tell you you won't be destroyed if you'll work like men to save yourselves!" John Hanley cried.

"Be, merciful, Jonanli," was their reply.

"All things are in your hands—we pray you to let us live."

With an exclamation of anger John Hanley snapped off the instrument.

"Children!" he exclaimed to himself. "All the things I've done for them through the thousands of years, the tasks I've lifted from them, It's all made them weak children, solely dependent on my mind.

"And I thought that my mind, living forever and towering above theirs in knowledge, would let me make a super-race, where now it's made one of children who know no longer how to fight and do for themselves.

"Well, it's not too late to undo my error. Not if I can manage to save them from this thing—"

From the great temple of Jonanli, John Hanley reached and singlehandedly altered the processes and rhythms of earth's production.

The machines in the great workshops began to turn forth other machines, hordes of robots. They were unhuman in shape, but capable of greater variety of tasks than the more specialized mechanisms.

John Hanley concentrated a great host of these robots on building and equipping a fleet of spaceships.

When this was done the robot-manned ships sailed at once for Mercury at his command, to prepare that scorched little planet for coming human occupancy.

The robots left behind began construction of a still greater fleet of space ships of enormous size. The humans of earth helped in none of this but lay supine in terror, crying out constantly to Jonanli and staring in terror at the sun.

The sun was changing ominously, its light taking on a bluish tinge and then a violet. Its instability was increasing and the collapse would not long be delayed.

Meanwhile the robot-manned spaceships had reached Mercury. Across space John Hanley directed the robots in the tremendous task of preparing the planet. The first essential was to give the little planet a rotatory motion, since it had always turned the same face sunward.

This was done by pushing at the equator of the little world with immense beams of force, using the sun itself as a base and brace. Gradually Mercury began to spin and its rotatory motion steadily accelerated under the steady push.

Then came the task of giving the planet an atmosphere and hydrosphere. John Hanley's robots accomplished this under his orders by conducting chemical transmutation of elements on a colossal scale. Vast quantities of the rock substance of the planet were converted, atom for atom, into oxygen, nitrogen and hydrogen that were combined into air and water vapor that formed a gaseous envelope for the little planet.

John Hanley's plans had seen to it that the molecules of this artificial atmosphere had a velocity far less than the 1500 feet a second velocity of the molecules in earth's atmosphere. Thus Mercury, which, with its low surface gravity, would otherwise have been unable to hold the rapidly darting particles of an atmosphere, could retain this one.

The last work of the robots on Mercury was to erect cities for the housing of the people of earth, and to start into growth the plant-life that would assure a constant supply of oxygen to the new atmosphere. Then they returned to earth.

The aspect of the sun was now terrifying. Great changes could be seen with the naked eye on its surface and the air seemed full of electrical force, the whole solar system breathless. John Hanley ordered the embarkation of the people of earth in the great space fleet that had been prepared to transport them to Mercury.

Terrified as they were at the prospect, the people entered the ships at Jonanli's order. As they entered, robots detailed for the purpose administered to them certain drugs designed to prepare them bodily for the lesser gravitation of the new world.

Then the ships sailed. The robots who manned them had orders to transport their human cargo to Mercury, and then the robots were to destroy themselves. John Hanley was taking no chance of the human race being supplanted on the new world by its own creations.

On the earth now were left only John Hanley himself and a host of robots who had not been needed to man the ships. John Hanley commanded these to destroy themselves, and calmly they did so.

He remained, the only being left on earth.

His instruments told him that the end was at hand. From the roof of the mighty Temple of Jonanli, John Hanley watched that end. He saw the surface of the sun change and break as though it were boiling. Then the sun seemed suddenly shrinking.

Its color changed as it shrank, from yellow to pale gold to white. Almost before the eye could comprehend the extent of the change, the yellow, dazzling sun had become a little glowing white disk looking only a few times larger than one of the larger planets.

The sky above John Hanley darkened almost instantly, and a deep dusk fell upon earth. It was a dusk that would never end until earth itself ended. In that heavy twilight the stars became visable in the firmament, even close to the shrunken little sun.

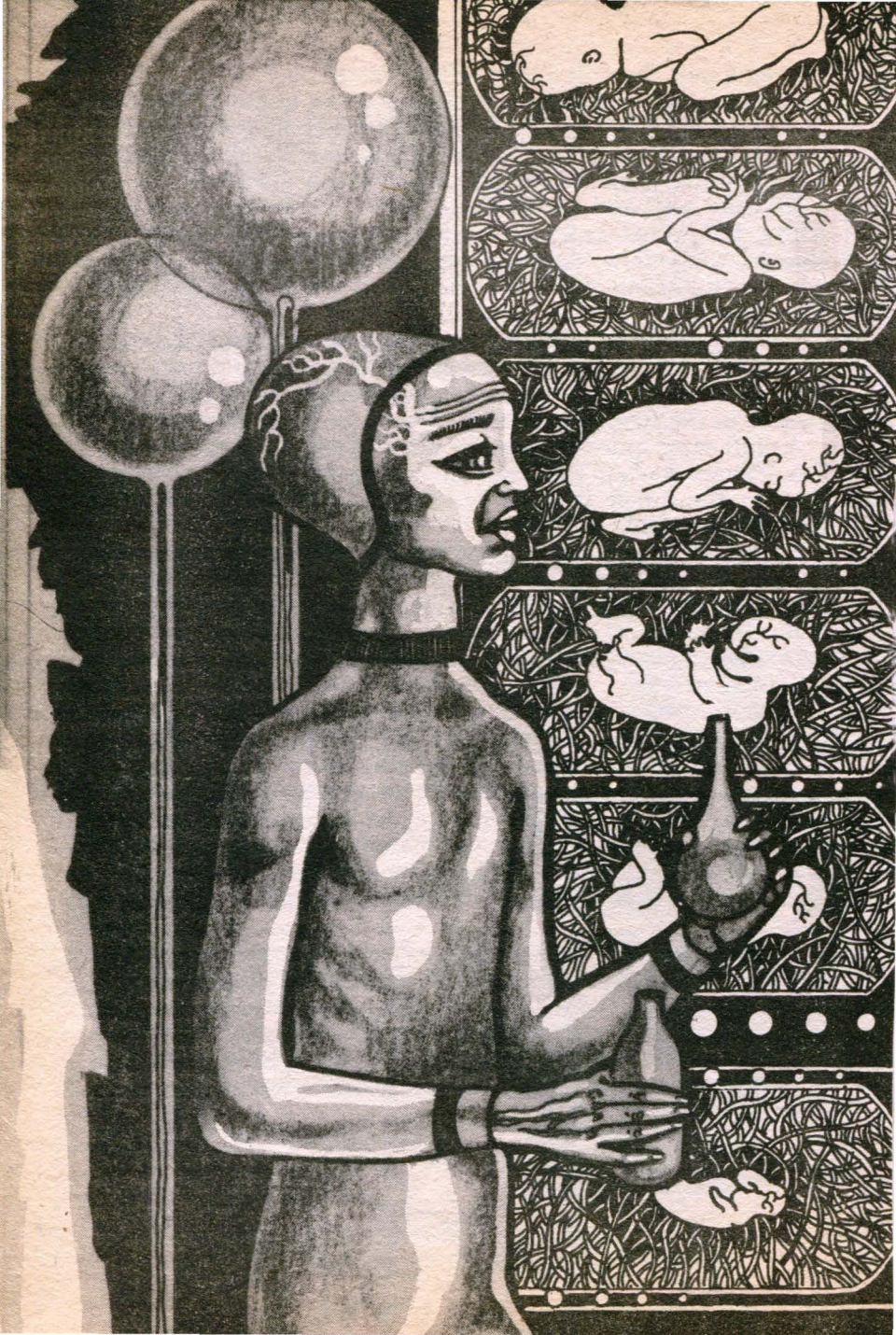
A chill came quickly upom the air, and rapidly it grew colder. The flowers down in the deserted garden-cities curled and withered in the quick frost. A few flakes of snow drifted down through the heavy dusk.

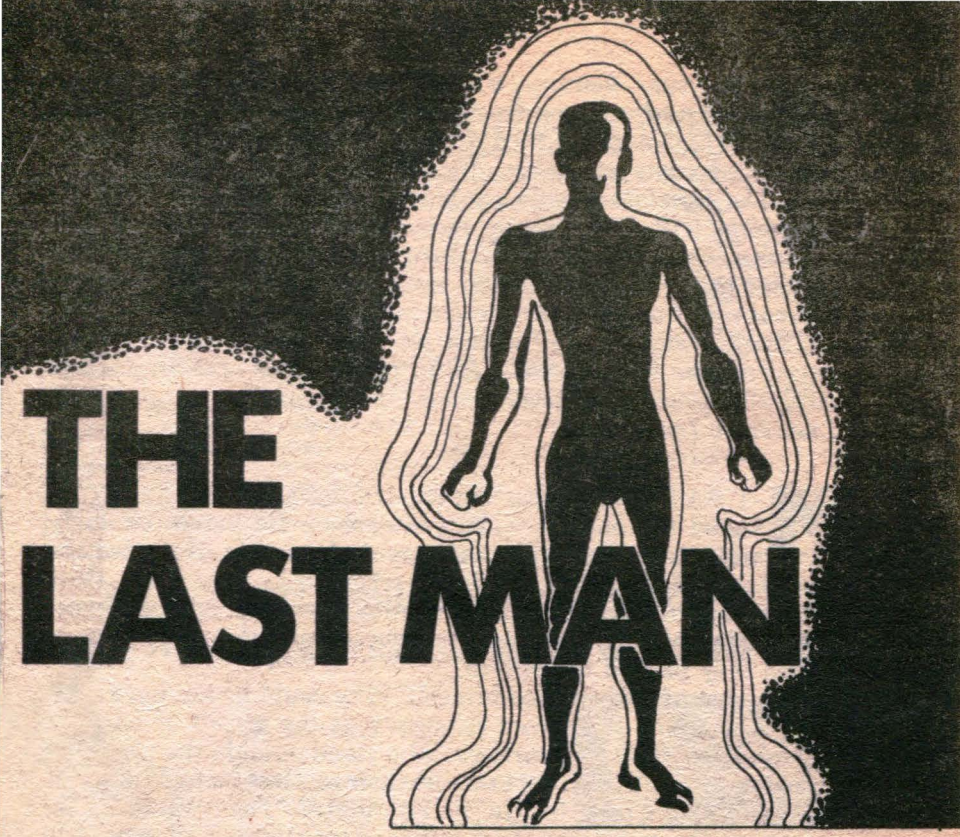
John Hanley sat on, unmoving. He felt content, now. The peoples of earth would take up life on that new world, without him. They would cry out for Jonanli's help for a time, but soon under the pressure of circumstance they would learn once more to do for themselves, would become again a strong and self-reliant race.

He had been wrong in living as a single super-mind down through the ages. He saw that now, and now he was undoing that wrong. And he felt content now to bring an end to the life of his mind, to let the one undying intelligence in the world die at last.

His memory went back through the hundreds of bodies his mind had inhabited, through the changing centuries and milenniums even to that first John Hanley who had conceived the great plan. Strange, how he and his memories were still clearest in his mind.

The snow was falling heavily, now, and icy frost was covering the world as the cold increased. He did not feel the cold, he supposed because he was too numb. The snow fell and the frost fell, and the frost crept, and soon even the atmosphere was freezing and falling in great flakes. Only a small white mound on the great roof showed where sat the god of a world.





THE LAST MAN

by Wallace West

This may be the ultimate fantasy of what could happen if women's lib were carried to its most outlandish extremes.

Radical feminists take heed ... if you thought your actions today were contributing to a tomorrow like the one described here, you might choose to slow down a bit and examine your goals more thoroughly. And male chauvinists would hardly welcome the fate this future world holds for them and the rest of their gender.

. . . .By that time, however, a significant precedent will have been established and a lesson learnt that will not easily be forgotten. The superfluousness of men above a certain essential minimum will have become recognized officially and unofficially as a social fact. The legislature will establish laws to guarantee that this minimum will have become recognized officially and unofficially as a social fact. The legislature will establish laws to guarantee that this minimum should not be surpassed, and in a very short while it will become a mere matter of routine to proceed to an annual slaughter of males who nave either outlived their prime or else have failed to fulfill the promise of their youth in meekness general emasculateness and stupidity.—Anthony M. Ludovici's Lysistrata.

M-1 SAT in his glass demonstration cage and hated. He hated the endless, sultry afternoon. He hated the dusty museum in which he had spent all his life. He hated the limp trees of the park which stretched in all directions, their fronds, sagging and listless in the midsummer heat, half obscuring, half revealing the gigantic structures of the metropolis in which they panted for breath.

But most of all he hated himself! Why could he not have been born a woman? He stared enviously at the crowd of narrow-flanked flat-breasted workers, who stood outside the cage and gazed at him with dull curiosity on their soulless faces. Women at least had a purpose in life, he ruminated. They would work, straining their muscles and minds eternally at tasks that exhausted them, so that at night they sank into a stupor of forgetfulness which was only broken when the work gong sounded again.

While he, the last man, had nothing to do but appear in his cage on rest days to appease the workers' curiosity as to what a man had been during the dark ages when the human race was bisexual. Otherwise his time was his own.

Nobody molested him unless he attempted to leave the museum unattended. His keepers brought the best food obtainable, saw that his wants were attended to, and allowed him to browse long months away in the files of the museum library, where the dust of ages were piled inches thick over the imperishable metal-foil volumes.

Even curiosity, that one trait which had dragged mankind through the mire of prehistoric times, into the trees, across the seas, and at last to a magnificence which had almost allowed him to touch the stars, was dying. It was only the fact that the last man might be seen there, that dragged the plodding toilers

through the little park on rest days. Otherwise they strictly avoided the place, spending their time sleeping, or staring blankly in front of them like wearied cattle. It was useless to think of new things.

The museum was a mystery, even to M-1. Built ages ago before the race had started its long decay into automatism, it towered story on story above the ground level, and burrowed additional stories beneath the earth. Vast stretches of it he had never explored. In other wings the lights had long ago expired, and he was forced to creep through tottering skeletons of prehistoric animals, among the ruins of towering bookstacks, searching here, there, everywhere in effort to find the meaning of all this.

The bloated sun sank with infinite slowness behind a gigantic glittering structure which occupied one whole side of the park. The crowd of curious drifted away with equal slowness. The rest day was over. Tomorrow the human hive would drone again with unceasing, breath-taking activity, striving, ever striving, to produce enough food to supply the myriads of beings, which inhabited Nu Yok.

Why, he wondered, was not the population cut? With reproduction reduced to a mere matter of chemistry, that should be an easy matter. Then he realized that if the population were reduced, factories would be idle; wheels would cease to turn. He nodded to himself as he gathered up the few books with which he had been killing time during the day. That would be against the economy of the hive. No one must be idle—no one must cease from unremitting toil—except himself. He ruminated on these strange things as he slowly retraced his steps toward the little room where he ate and slept.

Perhaps it would be well to describe this museum freak, as he loiters down a long, crumbling corridor in the half-darkness, broken here and there by spots of semi-incandescent glow. He is tall, well-formed, hardly distinguishable from the man of the twenty-fifth or thirtieth century, except that his cranial development is somewhat more marked. He appears to be in mature youth, he is perhaps sixty or seventy years of age. He is slim and taut of body, like one who has taken care of himself phyically, but he has a slight stoop which indicates that he has spent much of his life pouring over books. His form is trim and masculine, with flat hips and broad shoulders, and lacks the sexless smoothness which was so noticeable in his watchers of the afternoon.

In fact he is a throwback, an unexplainable atavar, which the physicians have decided to preserve for a while as a warning and a curiosity.

He lounged listlessly in his room where a gaunt, sour-faced woman—if you could call a creature a woman who was as sexless as a worker bee—was stirring a mess in a bubbling kettle.

"What!" he grumbled, "Carbohydrate 5482 again? Why don't the food laboratories vary their formula once in a while? They used to, when I was a youngling."

"Costs labor; costs labor," she snapped back. "The sources of supply are getting scarcer, too. Besides it's not for the likes of such as you to be complaining."

"But why not discover new sources of supply?" he puzzled.

She straightened from her stirring and surveyed him with loathing and undisguised hatred. "Tis a good thing you are the last man," she stormed. "Such crazy ideas! New sources of supply! When you well know the last source of supply was discovered two hundred thousand years ago! Shame! To suggest such blasphemy! Atavist!"

With that last shot, which made him wince, she left him.

He attacked the chemically manufactured soup with something like gusto. He knew it contained all the vitamins, proteins and other ingredients, combined into just the right form to sustain life at the lowest possible cost.

He ate in the shortest possible time. Then, relaxed and surfeited, he dropped into a reverie which, as always, revolved around his uselessness in this feminine world. From his reading of forgotten books he understood pretty well the conditions which had brought about the mono-sexual world in which he lived. The enormous release of feminine energy in the twentieth to thirtieth centuries, due to the increased life span and the fact that the world had been populated to such an extent that women no longer were required to spend most of their time bearing children, had resulted in more and more usurpation by women of what had been considered purely masculine endeavors and the proper occupations of the male sex.

Gradually, and without organized resistance from the "stronger" sex, women, with their unused, super-abundant energy, had taken over the work of the world. Gradually, complacent, lazy and decadent man had confined his activities to war and sports, thinking these the only worth-while things in life.

Then, almost over night, it seemed, although in reality it had taken long ages, war became an impossibility, due to the unity of the nations of the earth, and sports were entered into and conquered by the ever-invading females.

After that the rest of the pitiful story was simple. The useless ornamental males began to be treated in much the same fashion

in which the worker bees treat the drones. Having lost the mastery of the world, the men found themselves helpless and in the way. Slowly but steadily they were exterminated by the ambitious females.

There had been fighting, of course. M-1 realled with a thrill the tales of those last battles. It was during the great famine, just before chemists had discovered how to manufacture food out of inorganic matter.

"Then, suddenly," to quote a book of that period, "a few of the leading women preceived with apocalyptic clarity, not only that the superfluity of men had become a burden on the community and a menace to the food of the children, but also that the reduction of their number to the barest minimum indispensable for the purposes of fertilization would be a two-fold boon—it would relieve the food crisis both for the moment and possibly also for the future, and obviate forever the danger of a masculine or slave rising.

"A sex-fight at the distributing station of a large store sufficed to light the first spark of this new conflagration. A dead set was made against the men, not only around the original focus of the trouble, but everywhere. The legislature, recognizing their opportunity, supported the popular fury, and proceeded to a systematic slaughter of males, until, with the help of the regular troops, it was found practicable to protect and preserve a small nucleus for next year's fertilization."

Oddly enough M-1 admired the neatness and dispatch with which his kind had been wiped out. What use were they?

Finally some last genius of that glorious age had discovered the method of reproducing human life by chemical formula and the men were dispensed with altogether. Only a few museum specimens were retained to warn the world of the horror from which it had escaped.

In the ages which followed, great physiological changes took place. Women, no longer having need of sex, dropped it like a worn-out cloak, and became sexless, tall, angular, narrow-hipped, flat-breasted and un-beautiful.

But the world was perfect now, M-1 realized. No further change was necessary. He grew ashamed of his suggestion that new discoveries might be made. Everything was known! Life was complete, vibrant! The millenium was at hand, and he was the only discordant factor.

But somehow, he was dissatisfied, nervous, excited. Catching up a warm robe—for the long nights, caused by the gradual

slowing down of the earth's rotation during the ages, were as icy as the days were sultry—he wrapped it about him and started pacing the corridor again toward the observation cage. Something at variance with his environment stirred within him, he knew not what. Some urge of the summer which he could not drive away. The world was perfect. Yet he felt a note of misery which sickened him.

He remembered the dull, work-besotted faces of those for whom he posed once every ten days. There was not the joy among them that should be expected in a perfect world—the joy that the old, old books of poetry and love, which he had deciphered, indicated the world to be full of. What was wrong?

His steps muffled by the thick dust, he stumbled along, finally emerging into the glass cage, where he had spent the day, to stand staring hopelessly at the stars. For the first time he had become shamefully muddled somehow.

Shaking himself out of his lethargy, he glanced about him—at the city which glittered not far off, its lights flashing like the signals of fairyland—at the dreaming trees, now revived from the universal weariness—at the half moon just peeping over the horizon.

Suddenly he felt that he was not alone. Glancing sharply over his shoulder, he fancied that he saw a dark shape take form among the trees.

Then, winging its way through the impenetrable glass of the cage, came a voice, clear and musical; unlike the dead accents which he had become accustomed to from his keepers and from occasional curious celebrities.

In his astonishment he forgot the purport of the words—if they were words—for the message seemed to ring inside his head rather than in his ears. Like a flash he realized that the person outside was using telepathy, that mythical art supposedly lost since almost the dawn of history.

"Who are you?" Like a knife thrust the query flashed into his consciousness through the soundproof glass.

As in a dream he felt the segments of his brain click into a long-forgotten connection to reply in kind: "M-1, The Last Man."

The figure outside approached the cage and in the dim moonlight he stared in wonder. Hair red as slumberous fire—eyes blue as the heavens—a face fair as the dream face which sometimes tortured him.

Unconsciously, true to his training, he recoiled. "An atavist!" he gasped, "A throwback! How did you escape?"

She laughed, and though he could not hear the fairy sound, he saw the back thrown head, the rounded throat, the laughing eyes. "The keepers are so dumb," she answered. "It is so easy to be free. Why don't you join me?"

He shivered as at a sacrilege.

"Don't talk so," he protested. "It would mean your death if the keepers heard. It is wicked."

Again she laughed and this time tossed one milk-white arm against the moon. "Nothing is wicked," came the message. "And their dead minds are too dull to understand. Come out and dance in the moonlight with me."

For a splendid instant he had the impulse to seize a chair and smash his prison of glass, but lifelong inhibitions were too strong. A wave of horror and loathing seized him. "Go away, demon," he gasped. "You are a rebel. I shall warn the guard."

Unafraid she wrinkled her nose at him, then wrapping about her a long black robe which but half concealed her deep breasts and the forgotten womanly grace of their carriage she whispered "Another time," and vanished among the shadows of the park.

Frightened, horrified, yet fascinated as though by a devil, he stood staring after her for a long moment before he fled back down the protecting corridor to his room as if he were pursued by a ghost.

For long hours he sat at his desk staring into the shadows which the light did not dispel. Well he knew that it was his duty to report an atavist at large. Well he knew the havoc they had wrought in the past by making uprisings against the established order, by fanning dying sparks of revolt into short-lived conflagrations, with their talk of beauty and love—and liberty. But that was long ago, while there were still men, although a dwindling minority.

Now he was the last man. The call was to him. A witch like those in the old, old stories, was lying in wait for him.

He fell into a fitful slumber, but was beset by dreams—strange, mad dreams of beauty and soft arms and flashing limbs which brought him to his feet in a sweat of agony a dozen times during the night.

Old WA 10 NA 56, whom in defiance of the rules he always called Wana, found him, dishevelled and feverish, when she brought the morning meal.

"What's the trouble?" she queried anxiously, for the position of warden to the last man had its responsibilities. "Are you ill? Shall I call a physician?"

"No," he snapped. "I need a change, Wana, that's all. Let's drive to the seashore for a day. This place chokes me."

"All right," she grumbled. "Though what good you get out of sitting and staring at the waves I can't understand. Nobody else does it. But you're a freak," and in spite of her surliness, a wisp of pathos crept into the last words and her face, which looked as if the soul had been eroded from it long ago, assumed a haunted expression.

A car was brought round and they clambered in—Wana dressed in nothing at all, for with the passing of sex the need for clothing had ceased to exist, and the man swathed in a long, black robe, such as those used to cover the infirmities of the aged.

Through the wide, straight boulevards, flanked on either side by glistening skyscrapers of surpassing beauty, they drove at breathless speed. Everything was clean with a dazzling, agonizing cleanness which made the senses reel. He longed, before they had driven half an hour, for the forgotten dust and gloom of the museum.

There, there was no traffic jam, no noise, no hurry—but only a dogged, persistent energy that was capable of moving mountains, but knew not where to move them. Through the sides of the plate glass edifices of the metropolis, he caught glimpses of myriads of workers, toiling frantically in perfectly hygienic surroundings, soaked in the health-giving ultra-violet rays of the sun, which the crystal walls admitted in their full power. He found himself panting for breath like a runner in a nightmare, and cursed his stupidity in allowing himself always to be thus affected when he was taken through the manufacturing district.

At last they passed between two thousand foot high structures and emerged abruptly into the open country. There were no suburbs, no encircling truck farms. The city ended with the abruptness of a thunderclap, and towered behind them like a heap of diamonds.

Wana pushed forward a silver handle. A rocket motor in the rear of the car began coughing gently. The machine rose into the air and shot, at tremendous speed, over the deserted countryside. Then, under the skillful guidance of the driver it settled to the ground on a sunny, tree-covered knoll near the seashore.

On all sides stretched unutterable desolation, for the race long ago had abandoned the unprofitable tilling of the soil, and now resorted solely to the converting of inorganic into organic matter for food. The countryside round about was as wild and abandon-

ed as in the forgotten days when Sir Walter Raleigh first stepped ashore there.

Never straying from under the watchful eye of his keeper, M-1 strolled about the beach or swam in the warm waters of the Atlantic. He had tossed aside his disguising robe, now that there were no spectators, and, relieved from the tension of the city, romped in the warm sunshine like a child.

At noon he swallowed some food pills and, tired by his morning's exercise, went to sleep under a massive oak tree.

He awakened by a sibilant hissing close beside him. Looking up, he beheld the girl he had met in the moonlight the night before.

"Ssh!" she cautioned. "Your nurse is asleep."

"How did you get here?" he gasped.

"Vacation," she giggled. "My guards are searching for me in the woods."

"You followed us," he accused.

She nodded and her face assumed a faint pink tinge which puzzled him, yet set his pulses throbbing. "I heard you talking about your vacation, so I became conveniently ill and suggested a trip to the same place."

"Heard me?" he puzzled.

"Well, yes. Or thought you—or—something. Telepathy, you know."

"Who ARE you?" was his next question as he stared at her supple grace. "I mean, why are you alive?"

"Oh a sub-normal development, like yourself," she replied, and oddly enough there was no shame in her voice. Rather, he decided, she gloried in the fact that she was a hundred thousand years behind her age.

"You see, they thought I was normal while I was a child," she added. "Then, when I went queer—you know their horror of killing things."

"Do you work?" he asked, remembering the universal law.

"Oh, sometimes," she nodded, as she seated herself beside him. "You know they" (she spoke almost, he realized as if she were mentioning some lower order of animals) "have lost their sense of color values to a large extent, and they find me very valuable in the food factories, where the color of the slides has a great deal to do with the ionization."

"Why," he asked her, "do you stay in the food factory?—Because you can't escape."

"Can't I? she mocked.

"Yes, you could run away," he admitted, "but then what? Away

from the food distributing stations, you'd starve to death in two weeks. What would you eat?" He demanded, his exasperation rising at her superior smile. "Bugs? Grass? Animals?" the horror of this last suggestion almost choked him.

"Why, yes," she admitted serenely, and to his consternation began stripping a bush of its fruit and putting the dark red berries into her mouth.

"Stop!" he cried, grasping her arm. "That stuff will kill you! You must know that the human stomach has atrophied from eating concentrated food for thousands of years."

"Mine hasn't. I've tried these berries before. Yours hasn't. You forget that we were born out of our time. Of course these—these animated fossils—would die," she admitted, turning up her nose at the reclining figure of Wana, "But not us! Try these." She dropped a cluster of the ripe fruit into his hands.

Hesitantly he complied. His mouth, unused to anything but pills and liquids, puckered strangely. But, fired by her example, he persisted. Long idle salivary glands came slowly into action. His jaws, unaccustomed to munching, began to ache. But a satisfying feeling of warmth and well-being pervaded him. Taste, that long-lost fifth sense, returned.

"Music," he muttered. "It's like music inside of one." He reached for another bunch of the fruit.

"Easy," she laughed, dancing nimbly out of reach. "Don't forget that this is your first trial. You'll probably be sick as it is."

Their voices unconsciously had risen during this exchange, and Wana stirred in her sleep.

"Ssh!" whispered his companion. "I'll see you next restday night. "Goodbye." Like a shadow she fled through the trees before his keeper could rub her ancient eyes and sit up.

"What have you been doing—letting me sleep like this?" she scolded, jumping to her feet, for Wana was very active in spite of the fact that she had about reached the limit of usefulness and would be shuffling off this mortal coil in the lethal chambers not many years hence. "Come. It's time to go," she said, throwing his funeral robe about his shoulders. "The sun is setting. Climb into the car."

Escape! The idea, not entirely new, interested him as they rushed homeward through the evening sky. Was it possible to live as the birds and animals did? He was fascinated.

Then, as if in answer to his query, an awful stomach-ache gripped him as his digestive track, unused to solid nourishment, rebelled against the berries. He writhed in agony, and knew the horror of approaching dissolution. Luckily Wana was in the

control cabin and saw nothing of what transpired.

But he did not die. The pains subsided, leaving him limp and covered with cold sweat. Was liberty worth such a price? He wondered.

During the next ten days he prowled in unaccustomed corners of the museum library, and as chance would have it, came upon a book entitled: "Natural Food. A Warning of its Perils." Written at a time when concentrated nourishment had been in universal use but a short time, this volume warned back-sliders into gourmandism, of the awful penalty which would ensue if vegetable or animal food was consumed. Unconsciously it dropped hints now and then, however, of the manner of preparing those odious viands. He read and remembered.

The next rest-day dawned and brought its usual crowd of worn toilers to stare into his crystal cage. But he no longer envied them. He no longer hated himself. In fact he was not thinking of such things. He was thinking only of the night that was coming.

Forgotten was his horror of the witch girl. Subconsciously his mind had made common cause with hers. They were one, fighting an alien world.

Darkness came at last. After consuming his nourishment, he avoided Wana, crept into the park, garbed in his black robe, and waited. Almost at once a soft, strong hand slipped into his.

"The spell works," said the well-known laughing voice. "The witch has you charmed. Did I not tell you escape was easy?"

They stopped and looked at each other under the moon, which had just passed the zenith. A great wave of tenderness and admiration swept over him. Awkwardly he seized both her hands in his.

"You're so different," he marveled. "You make me feel queer here." He tapped his chest. "Like tears," he stumbled, "and sunshine, and flowers."

She smiled, and leaning forward, gently touched her lips to his. A shock, like that from a dynamo, passed through him. He leaped back as though she had struck him, then re-approached.

"What was that?" he asked stupidly.

"A kiss," she answered.

Through the long avenue of elm trees, just the same as those which lined parks when the world was young, they wandered into the flood-lighted streets.

They attracted little attention as they loitered along. A few persons crossed their hands on their chests as they passed in a sign of respect. With their cowls closely drawn, and their slow pace, M-1 and his companion were easily mistaken for the An-

cients, or Law Givers, and so passed unquestioned.

For, although it was a universal rule that persons should enter the lethal gas chambers as soon as they had passed the limit of usefulness—that is, when they could no longer do their twelve hours of labor daily—exceptions were made in the case of legislators and captains of working units, who were presumed to retain their intellectual facilities after their physical powers had declined.

These lucky ones lived until they died natural deaths, but they went clothed in long black robes to avoid awakening envy in those who were doomed to die much younger.

"What is your number?" M-1 asked suddenly as they entered a long, roofed throughfare lined on both sides with great warehouses and humming factories.

"My name is Eve," she replied, smiling. "I gave it to myself. I have forgotten my number."

A half-memory of some old myth stirred him. "The first woman?" he mused. "And I am the last man. Strange."

He felt her mocking eyes upon him. "I shall call you Adam," she said softly.

"But that would be wrong," he stated. "Adam was the first man."

She merely laughed at him.

They turned into the portal, a vast structure which stretched for thousands of feet along the street.

"Where do we go?" he queried.

"This is unit 1,000 of the food factory," she explained. "I work here. Have you seen the inside of the hive?"

"Only in pictures," he replied. "I never was allowed to enter the factories."

They wandered down a long corridor, doors in which opened into what seemed endless rooms humming with monstrous machinery. Here and there, however, a room stood idle, its machines covered with dust.

"Those engines are broken," she explained. "The mechanics have forgotten how to fix them."

They went on, through labyrinthian tunnels, under overhead bridges, and on dizzy galleries that looked down on unremitting industry.

"Decay," she said suddenly. "Look at it, all about you, in spite of their breathless efforts. See," she pointed to a great mill, its screens broken and torn, its cogs rusted from centuries of disuse. "The world is dying. Soon—in a few thousand years, perhaps,

when this almost perfect machinery crumbles yet more—it will be dead."

"And you and I will be dead, too," he said bitterly.

"And the world will be given over to the animals and the birds and insects. Oh, the pity of it. A living tomb!"

"But I thought the world had attained perfection," he puzzled; "that all the great secrets of life had been attained; that life purred gently, like a perfect machine."

"So they say," she replied,"to hide the horror of the thing. But the machine is not eternal, and they have forgotten so much, so much!"

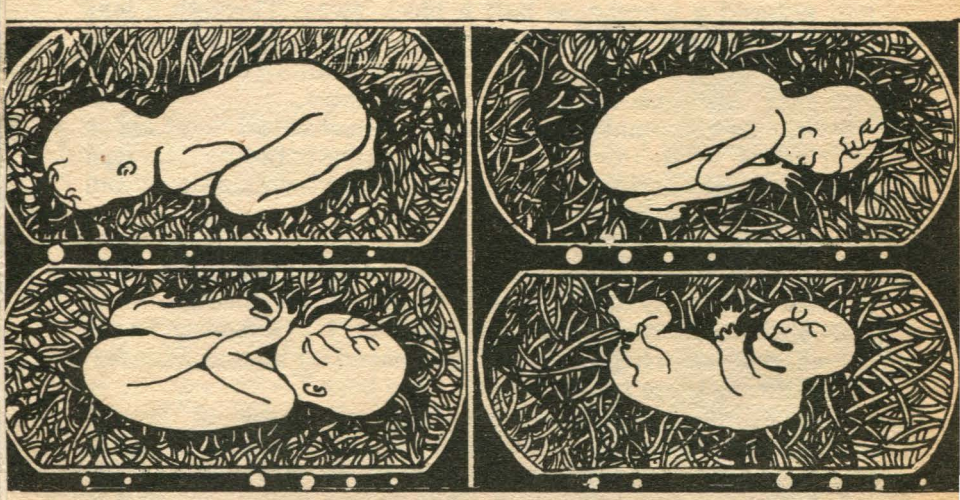
Passing into the street once more they stepped on one of the rapidly moving surface platforms which long ago had supplanted the clumsy street cars and elevateds, and sped, at breakneck pace, through the heart of the city.

"Where to now?" he asked.

"To the birth factory," She answered nonchalantly.

He gasped and something of his old fear of her returned.

"But you dare not," he cried clutching her arm. "Remember the law reads: 'No atavist, on pain of death, shall enter the precincts of the birth factory.' "



She laughed gayly. "We shall not be discovered. Remember, they have forgotten so much.—You have seen pictures of the place?"

He nodded.

"Remember the dome?"

"Yes."

"Well there is a gallery half way up it. Looks like a mere frieze from the floor. They have forgotten it. I found the secret in an old book. We shall not be discovered."

They stopped in front of a magnificent building, not of glass but of marble. It was without adornment and beautiful as a naked sword blade. Unlike the other buildings of the city, it was detached from the crystal roof that capped all the streets, and stood alone in a little park.

Before its portals paced a strong guard, heavily armed, strangely enough, with weapons closely resembling those used in the last wars. Rifles and automatic revolvers were the only mobile killing machines known, for progress in that direction, as in all others, had stopped long ago.

"Come," Eve directed.

They skirted the building under the watchful eye of the guard and entered a warehouse half a block away. Through a long series of storerooms, which were deserted at that late hour, she led him, finally to stop in front of a blank wall. Drawing a pitch pipe from her robe, she blew three soft notes.

"What do you want?" said a hollow, mechanical voice above their heads. Adam (for we shall call him thus hereafter) cowered in terror at this new development, but the girl replied slowly and distinctly:

"10, 42, 2, 74."

Slowly, ponderously, a panel in the wall swung back. They stepped into a tiny hall. The door closed behind them.

"A clever safe combination," she smiled. "I hope it doesn't wear out while we're in here. It hasn't been cared for in ages. Wonderful artificers these ancients must have been."

They climbed endless narrow stairs after passing through what must have been a subterranean gallery connecting the warehouse with the birth factory, and at last emerged upon the tiny balcony she had spoken of. They looked down. Far below in the middle of a vast hall pulsed six amber globes of light, arranged about a great globe of crystal.

The central globe, he knew, was filled with germ plasm from which reservoir the human race was perpetuated. From it flowed the eternal stream of life which turned the wheels and man-

ned the factories the world over.

The system, in its essentials, had been discovered in the twentieth century when a surgeon had placed a bit of tissue from the heart of a chicken in a sterile medium, fed it carefully, and kept it in an ideal environment. He and his successors had watched that tissue live for a hundred years. It was growing so rapidly that it had to be watched carefully and trimmed continually to keep it within the limits of the container.

As the growing scarcity and uselessness of the males, and the antagonism of the "free women" to becoming mothers, had grown in the old days, the legislators hit upon a similar scheme for perpetuating the race by chemical means. It might have been called the last creative work of the human mind.

A small quantity of germ serum was enclosed in the gigantic crystal globe under proper conditions, given the right type of food and allowed to grow, which it did at a tremendous rate. Then it was fertilized by the same methods, which the ancient French physicians, Alexis Carrel, Ebleing and Fische, had used to produce fatherless frogs.

This fertilized ovum, cultivated in embryonic tissue juice, then was allowed to grow in a type of incubator until it developed skin, bones and muscles and was ready to be taken to the nursery, a normal infant.

Two things the ancients had not calculated upon, however. First, they forgot that the eternally growing germ plasm could not continue the development of the race. Every child produced in this manner was on the same intellectual, spiritual and physical level with every other child. With the development of artificial birth the long increase in human brain capacity had stopped short; in fact, a slow decay had set in, as the serum lost its original virility through the ages.

The second mistake was in creating one gigantic birth factory instead of a number of branches. This resulted in terrific congestion as millions of children yearly had to be started in their growth and then shipped to distant lands where their adolescence was to be spent. In the old days there always had been danger of an uprising among the males to smash the plant, but this had long since passed and the guard about the portal was merely a formality.

Adam was interrupted in this revery by the voice of his companion.

"You understand, of course, why atavists are forbidden here."

He nodded. "Because in the dark ages they always tried to destroy the life factory."

"But now it is too late for that," he continued soberly. "Children no longer can be produced naturally, even if any one so desired." Then, forgetting his oft-repeated assertion that the world was perfect, the utter blankness into which the race was drifting swept down upon him like a bank of fog and he added bitterly:

"We are doomed. I see it all so clearly now. There can be no more progress. There can be no more supermen to drag mankind forward in spite of its blindness.

"No," Eve whispered, "but there are atavists to drag mankind backward to a point where it can get a fresh start."

The idea dazzled him. "You mean—we—we could have children—and build a new clean race?"

She looked down, blushing.

Still trying to grasp the immensity of her suggestion, he turned back to the scene below. "But," he muttered, "we would have to stop all this—stop all this, or they would crush us by the sheer weight of numbers." He stared at the softly glowing container below with a new and bitter loathing. Instead of the cradle of mankind, it suddenly had become a race's prison house.

Unwittingly he had leaned farther and farther over the railing of the balcony. Now, without warning, its ancient moorings parted and a large section of the balustrade tottered slowly outward and fell!

He heard a shriek behind him, felt his robe caught as he reeled on the edge and was jerked backward to the safety of the balcony. Unable to tear his gaze from the falling railing, he stared aghast. Would it strike the precious globe and shatter it? Would it? Would it? But the mass of twisted metal fell to one side, crushing one of the many guards below into a horrid pulp of blood and brains.

For a moment there was stunned silence in the hall. Then a babble of shrill voices arose, and a battery of spectacled eyes turned toward the two who clung to their perch on the balcony.

"Atavists! Atavists! Man the doors! Open fire! Guard the crystal!" shouted a captain of the guards waving her arms in strangely ant-like gestures. Adam found time to marvel at the ineffectiveness of it all; at the foreshortened figures scurrying about below; at their feeble shouts; at his impotence.

An explosive rifle bullet which tore a hole as big as a barrel in the wall beside him, brought him to his senses but, unmindful of his danger, he crouched at the edge of the floor and stared.

Bedlam had broken loose as guards strove to draw an armor plate cover over the precious globe of life serum. Shouts, shrieks, prayers, mingled to make a sound strangely like that of pigs

squealing. For it must be understood that the people worshipped the crystal as their only god. It was the giver of life. Long ago they had discarded all idea of personal immortality, but the dream of immortality for the race through the germ plasm still persisted, and the human bees sprang into battle formation, as ready to sting to death anything, any person that attacked their life stream, as a real swarm of bees is to fight for its queen.

Adam was shaken out of dazed horror by his companion. "Quick," she screamed. All her gaiety vanished—her fair face drawn into a mask of fear. "The stairs. It is the only way. They will throw a guard about the district, but perhaps we can squeeze through. Hurry, for God's sake!"

Down those endless stairs they ran—fell—rolled—their robes first in shreds, then lost. Bleeding and bruised they reached the panel.

Eve blew three shaky notes on the pitch pipe, which she had held clutched in her hand. "What do you want?" grumbled the mechanism.

"10—2, 2—74," she gasped between breaths.

The panel remained immovable!

Clenching her fists until the blood started where the nails cut into palms, Eve strove to regain her breath while the precious moments passed.

Finally she tried again—three short notes.

"What do you want?" queried the sullen, impersonal voice, within which seemed to lurk a note of mockery.

This time she repeated the combination with a clear voice.

Slowly the panel turned.

Down the dimly lighted warehouse alleys they fled. Back of them a voice raised the view halloo. The game seemed ended. The world's last chance gone.

Somehow, nevertheless, they kept ahead of their pursuers. Winding, twisting, dodging through piles of machinery, bales of goods, past unknown bruising, lurking, inanimate objects, which seemed designed to beat out their brains, they finally saw a floodlighted street ahead.

A bolt of dark cloth caught his eye as they raced for the entrance. "Here," he gasped, tearing off two lengths. "Wrap this around you as a cloak. We'll make it yet. The alarm has not spread this way. They have forgotten to inform the radio controls."

"You go ahead, " she panted. "I'm done for. My cell house is back the other way. I'll never get in unnoticed now."

"Come with me," he directed, propelling her toward the deserted, speeding platforms. "They never can find you in the museum. Probably they'll never think to look. And it they do I know every nook and hiding place. Hurry! Don't forget our purpose."

The platform swept them away, but not before they could hear the cell houses bursting into frenzy behind them as the workers learned of the attack and poured forth to the chase.

Still, for some strange reason, the radio alarms were silent. No one impeded them, as the almost deserted ways swept along.

At the park they leaped to the ground and fled through the dark trees. Wasting no time, he dragged her through the museum entrance, hid her behind a mass of bones that once might have been the skeleton of a mastodon, and, divesting himself of his robe, threw himself on his couch and lay as though asleep.

And not a moment too soon. The alarms were working at last. Loud, raucous and shrill, they blared throughout the city the news of the outrage. "Check all atavists," came the message. "Kill instantly those who are not in their cells. Kill! Kill! The humanitarian laws are in abeyance. Spare no suspicious atavist. Our race must be preserved."

Shaking with fright and apprehension, old Wana, who had pledged her life to keep watch over M-1, but who could not resist taking a nap now and then, peered into his shadowy cell.

He lay at ease, breathing deeply—evenly. With a sigh of relief she closed the curtains. A minute later he heard her reporting to the chief that her charge was in his bed.

The next weeks were full of formless terror, yet lighted by the growing love between the last man and the woman he now had chosen as his mate. During the long, dusty days, when they prowled the shadowy alcoves together, their love blossomed like a flower.

Endlessly they planned escape, but in their hearts they felt it was useless. Endlessly he toiled through brittle volumes seeking some method of destroying the hateful life factory but, although there were hints of forgotten explosives, the formulae were meaningless to him. Besides, he had not the materials to manufacture even black powder.

Adam shared his food rations with Eve, without exciting the suspicions of Wana, but he and the girl grew wan and weak from lack of sufficient nourishment. She still hid in the dark recesses of the building, where he would find her waiting for him, with the same gay smile on her pinched face every morning, after Wana had made inspection.

Hand in hand they would wander for hours in the dreary ruin, stopping to wonder at some monstrous skeleton; shouting with delight when they found a beautiful trinket or ancient scarab among the debris of an exhibit.

Or, their arms about each other, they would sit in some far-away sunny corner and dream great, impossible dreams of the world they would create.

Somewhere he had run across a scrap from a forgotten poet which kept running through his head as though in mockery:

Awake! could you and I with fate conspire
To grasp this sorry scheme of things entire,
Would not we shatter it to bits—and then
Re-mould it nearer to our Heart's Desire.

He quoted it to Eve one day, and comforted her when she burst into tears.

Then, when all seemed lost, when the shrinking of undernourished tissues made them nervous and irritable; when it seemed they no longer could hold out, he found the secret!

In an unexplored subterranean gallery, where cobwebs hung in yard-long streamers, where bats flitted squeaking from rafter to rafter, and where the only light was furnished by a flashlight he carried, they came upon rows and rows of hermetically sealed jars with unfamiliar inscriptions.

Rubbing the dust from several of the labels, he puzzled over them.

Suddenly Eve clapped her hands in delight. "It's ancient English script," she cried excitedly. "See! The kind that was used before the phonetic alphabet was brought into use. Let's see—I know a little about 19th century writing—

" 'Samples of high ex-plos-ives used in the World War,' " she spelled out laboriously. " 'In this group are some of the dead-li-est chem-i-cals ever dis-covered by man. The m-a-t-e-r-i-a-l contained in the cen-tral can-i-ster is T.N.T. (trinitrotoluene). Do not touch!' "

Their lips trembling, they stared at each other over the feeble lamp. "T.N.T.," he breathed. "I've heard of it."

Slowly she continued her translation: " 'Enough T.N.T. is contained in this canister to sink a b-a-t-t-l-e-s-h-i-p' What's that?" she puzzled.

"A big floating war vessel, I suppose," he whispered.

"Read on!"

" 'A slight concussion is enough to explode this material' " she continued more rapidly. " 'For this reason especial care has been taken to seal the canister hermetically, and to protect it from

shock in a subterranean room.' " Then followed instructions for moving the exhibit if it were ever found necessary.

"Do you suppose it has deteriorated?" she pondered.

He said nothing for a moment, then replied: "Suppose it has. It's our only chance. If we can destroy the life factory, it probably will disrupt the air patrol so that we can escape—if we can steal an air car."

Hunger and the desperateness of their situation forgotten, Eve threw back her splendid head with the old reckless gesture.

"I'll drop the canister from the balcony," she cried. "If I live, we shall escape. I feel it!"

But Adam shook his head. "It's my place to do this thing. I will creep over the roof spaces tonight to the warehouse entrance and may succeed in reaching the gallery. One chance in a thousand to escape or overpower the guards—and I am stronger than you."

In spite of her entreaties, he persisted. Finally she stopped trying to dissuade him, kissed him tenderly and said no more.

Gently they lifted the long steel canister and carried it as near as they dared to the entrance of the museum. There they wrapped it in cloths and adjusted straps about it so that Adam could swing it over his shoulders.

"I will ask to take a night flight in the air car," the last man plotted. "Wana will humor me, because I look so ill, and she suspects nothing. Then, before the car arrives, I will take the canister and try to drop it from the balcony. When you hear the explosion, overpower Wana instantly and drive to the entrance of the warehouse. Can you do that?" he queried, noticing her sagging shoulders.

She straightened quickly and the tired lines left her face. "Yes," she nodded. "Wana is old and I am yet strong."

The final arrangements were quickly made. Wana acceded to what she called her ward's foolish whim. He asked her not to disturb him while he took a short sleep and to bring the car in an hour. This also she agreed to.

Then, as midnight approached, he slipped to the entrance, shouldered the grey canister, wrapped his robe about him in concealing folds and crept into the park.

Cautiously he worked his way among the trees, then, when the way seemed clear, crept into a building across the square. Evading the watchwoman, he started mounting the many flights of unused stairs toward the roof spaces. His heart pounded under the unused exertion, but he persisted, resting at landing after landing.

As he had hoped, the door to the roof was unlocked. He pushed

it open and crept out upon the city's glassy shield, which extended for miles in all directions, and was broken only by the tops of the greatest of the crystal skyscrapers.

A heavy rain was falling. The glass was wet and slippery and his load made him clumsy, but he staggered along toward the life factory which, he knew, lay about a mile to the northward.

Hiding under eaves and projections when search-lights from the skyscraper tops swept the blank expanse, and dodging out as soon as the beams passed, he pushed forward doggedly.

At last the tower of the factory loomed before him, across the open expanse of its park. He tried the roof door of the warehouse in which lay the secret passage. It was locked. The legislature was taking no chances with roaming atavists. In fact, he knew that several hundred female retrogrades had been killed since the falling of the balustrade.

In desperation he hammered upon the door with clenched fists. Perhaps someone would investigate. He held his ear to the jamb. Footsteps approached from within. It was a lower level guard.

"Who's there," came the challenge.

"One of the roof guards," he replied in feigned excitement. "There's an atavist at large on the roof spaces. I need help."

Quickly he laid the canister on the roof and crouched beside the door. Would the ruse work?

Unsuspecting, the dull-witted guard turned the lock and stepped upon the roof. He flung himself upon her with fury before she realized the situation. Pinioning her arms so that she could not reach her weapons, he hurled her to the roof. Her head struck sharply against a grating. Her struggles ceased.

Snatching the canister, he leaped inside and locked the door. He would have to chance her reviving and warning the real roof guard.

Not daring to use the elevators, he raced down the stairs, just escaping disastrous falls more than once. By a miracle he missed the other guards and at last stood before the panel.

Shielding the noise as much, as possible, he blew the whistle and gave the combination.

The door swung open and closed behind him. Safe so far!

At last he stood again upon the balcony. Below, the room seemed filled with armed soldiers. A rope ladder dangled from the ledge to the floor hundreds of feet below. Not five feet in front of him, drowsing over her rifle, stood a guard. The secret had been discovered. A second perhaps and she would turn!

Tearing the T.N.T. from his back, he hurled it at the steel armor which still covered the life globe below and said a swift

prayer to a forgotten God.

Things happened with amazing swiftness and clarity. The guard in front had heard him. She whirled, her rifle at ready.

Then—there was nothing. He felt himself drifting in a world without sound or light. At peace hours afterward, it seemed, an agonizing pain awakened him into consciousness.

He peered into blackness—a soundless, still opacity. A wild desire to scream came over him. He shouted, but heard no sound. Remembering his flashlight, he tried to find it in the pocket of his robe, only to discover that the robe was gone and that his right arm dangled uselessly.

With his sound arm he felt about him. Two feet along the balcony his hand descended into space. Back of him the wall had a jagged rent extending as far as he could reach. The truth of the situation dawned upon him. The explosion had been so terrific as to tear away all of the balcony, except a tiny projection upon which he lay.

Fearfully he felt his way along this. Was his escape cut off? He touched the edges of the doorway. Safe! Unable to stand, he crept down the stairs on hands and knees. Half of the steps seemed missing. Once he fell five or six feet. But he persisted.

A surge of power filled him. The life serum was no more, he knew. The top of the life factory dome must have been blown off by the concussion. He owed his life to a miracle. But he had succeeded!

There was one thing more to be done. What was that? His brain reeled and plunged. Escape! Escape! The thought spurred his lagging senses. Down—down—always down. One step—two—a dozen—then a dizzy slip through darkness where the steps had been torn away by the blast. On! On! Into the depths of darkness.

At last he reached the portal. The pitch pipe! Where was it? Gone, with his robe and the flashlight!

Drawing himself together he tried to remember the notes. Were they C, D and A, or S, D and F. He whistled the latter as nearly in the tone of the pipe as possible.

In reply came merely a jumbled whirring, clicking sound. He tried again—C, D and F. This time the whirring was a little clearer and he fancied he heard a blurred corpse of the word "Want."

"10—42—2—74," he answered; then held his breath.

A jarring sound of dislocated machinery was the only answer. The door remained closed!

Frantically he hurled himself against it and beat upon the edge.

It gave!

Slowly, grinding and jarring, it swung open—an inch—two—six. There it stuck. He forced his shoulder through the aperture. Still more it gave. Once again! Push! It swung wide open and he fell fainting to the floor outside.

Another interval. Then an insistent voice seemed calling.

"Where are you, Adam?" The words rang inside his head. Who was it? He was dead. Why bother? Nothing mattered.

But again the command came: "Hurry, Adam, Hurry. I am waiting. It is Eve. All the lights have gone out. The guard is demoralized. We can escape. You are not dead, foolish one. Come!"

Slowly, with swaying head, he crept on all fours toward the entrance of the warehouse. Even here the force of the explosion had been felt. Bales of goods, parts of machine mangled bodies were scattered in all directions. Semi-conscious, he squirmed under the debris—over it—on and on toward the entrance, where Eve, with the air car ready, was bending every atom of her being into that telepathic urge. Once he placed his hand on a cold face and screamed.

He reached the door. Cool air fanned his bleeding forehead. He saw the car. But the effort had been too great. He slumped forward, a sudden heap.

He recovered consciousness to find Eve bathing his face and talking tenderly to him as to a child. He opened his eyes. His head was in her lap in the cockpit of the air car. It was morning. Behind them the motor coughed gently. He was alive and free!

"Where are we headed?" he breathed as he smiled up at her dear face through the waves of pain which threatened to engulf him again.

"Toward the mountains," she replied, kissing him tenderly. "There we can hide. There we can be happy."

Then, as if she had forgotten the greater purpose of their flight, she was silent for a long moment. At last she added softly: "There, if we are not discovered and can live like the animals, a new and finer race may yet be born."

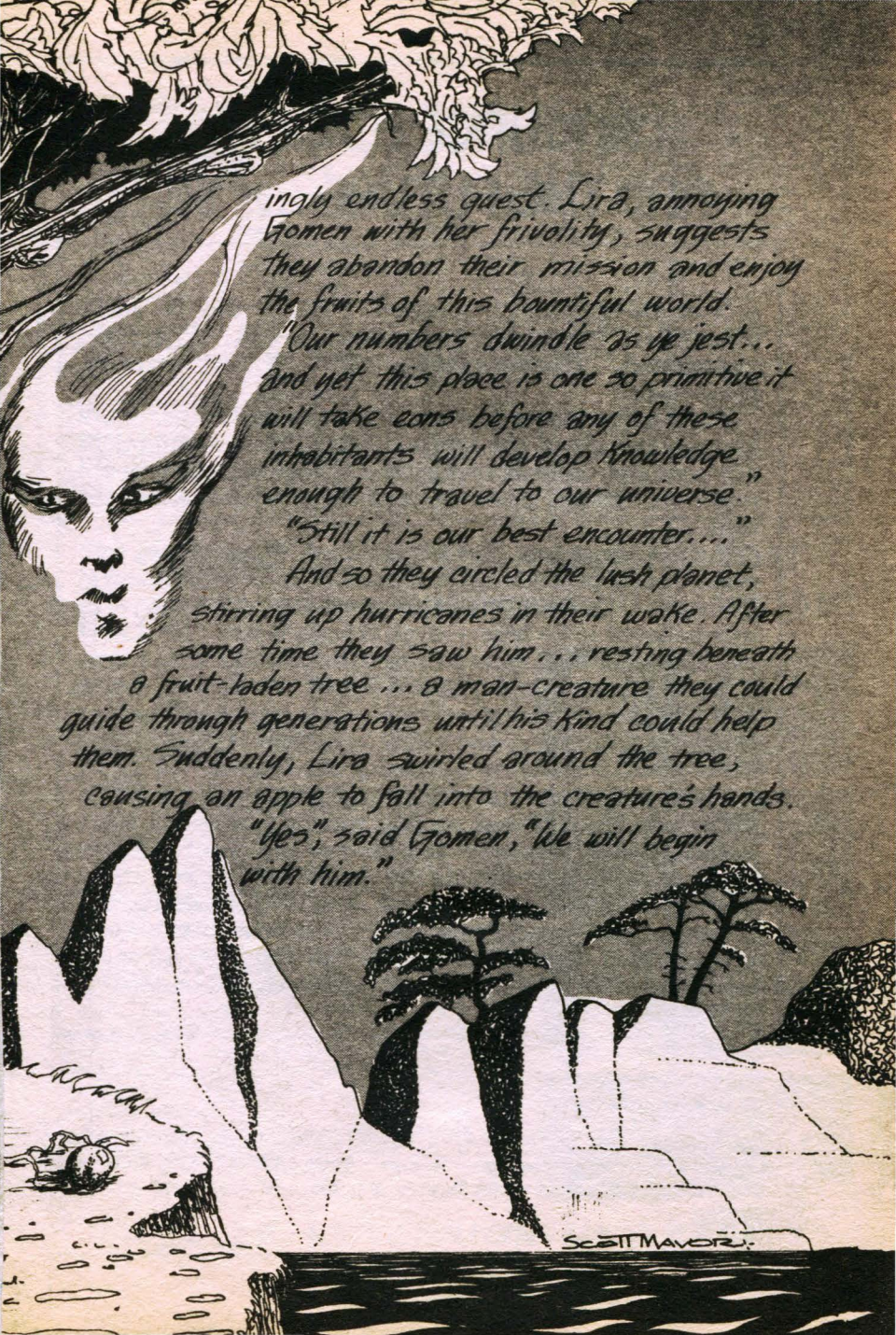
As she ceased speaking, the first rays of the rising sun splashed into the cockpit a shower of pale gold. ◉

From many light years away they have come, Gomen and Lira, to yet another green planet, searching for a race of beings to re-seed their dying universe...

Powerful creatures they are; swift as the solar wind— crossing many continuums in a seem-

Redundant Genius


SCOTT MAYOR


ingly endless quest. Lira, annoying Gomen with her frivolity, suggests they abandon their mission and enjoy the fruits of this bountiful world.
"Our numbers dwindle as ye jest... and yet this place is one so primitive it will take eons before any of these inhabitants will develop knowledge enough to travel to our universe."
"Still it is our best encounter...."
And so they circled the lush planet, stirring up hurricanes in their wake. After some time they saw him... resting beneath a fruit-laden tree ... a man-creature they could guide through generations until his kind could help them. Suddenly, Lira swirled around the tree, causing an apple to fall into the creature's hands.
"Yes", said Gomen, "We will begin with him."
SCOTT MAVOR

LANGUAGE, LOGIC AND THE FUTURE ...

"One thing leads to another." "Where there's smoke there's fire." "Anything can happen, and will." "Expect the unexpected." "History repeats itself." "History never repeats itself."

The English language contains dozens, if not hundreds, of assumptions about the future. Some of these assumptions can genuinely help us understand change and see forward into time. Others, however, inhibit our futures consciousness.

Future vision can also be retarded when we are self-conscious about thinking futuristically. In an experiment at Syracuse University it was demonstrated that if an event was believed to be true — even though it was only a forecast — people were quite willing to discuss its implications, to try and understand it and to take it into account generally. The same hypothetical event, when introduced as what it was, a conjecture, drew forth reluctant responses, and often resistance to even discussing the subject.

The question is: what strategies do readers have for redesigning our language so that we don't freeze up when thinking about tomorrow and become as skillful as future thinkers as we can utilizing our memories? Can you invent new assumptions, the way that Benjamin Franklin did, which can enable us to see ahead in time more clearly? And can you think of simple word-tests that would permit one to evaluate whether or not an assumption should be used?

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BUT I assure you. . ." his guide replied.

"There's always a fly in the ointment," the visitor continued. "Injustice is part of human nature. A society can't do without it."

"These are special conditions."

"*That* is the first injustice. Other planets don't have gobblers."

"But they do!"

"It's not the same thing. You've seen the gobbler-fleece from Morpheus IX. It's no better than wool. Only here in New Katanga . . ."

"Utopia," his guide corrected.

"Only here is their fleece as tough as iron—"

"And soft to the touch as watered silk." His guide sighed deeply; truly, there was nothing like gobbler-fleece.

"Your planet's prosperity is possible, however, only at the expense of Federation worlds that can't raise gobblers."

"True," his guide agreed wanly.

"If New Katanga would reveal to the Federation the secret of the gobbler-fleece—the special process you have developed here, I assure you . . ."

"On your right," his guide pointed out, "you will observe our new Civic Auditorium, renowned throughout the galaxy for the classic beauty of its proportions. . . ."

"I *assure* you that I would not be so apt to suspect the motive of your utopian pretensions."

"Each panel of the glass well is in the ratio of 2:3. The sculpture in the center of the fountain was executed at enormous expense by Berndt Thorwald, the Terran—who was since naturalized. It is an allegory of Peace, Prosperity, and Freedom."

"—!" the visitor grunted.

"Perhaps it is necessary, as you suggest, for a utopia to be

---

by Thomas M. Disch

All of us would really like to live in a perfect world, right? You may scoff, as does our hero, because, after all HOW could it ever happen? There is always going to be some schnook who's trying to get something at someone else's expense. Anyway, look at it this way; things CAN be perfect ... just not for everyone at the same time! Find out how it works.

UTOPIA?
NEVER!

isolated to a certain degree. We do enjoy advantages here that are wanting on—what did you say your home-world is called?"

"Aridity VI."

"Just so. Yet, our chief advantage is not our monopoly of gobbler-fleece but the perfection of our social institutions. Here there is no crime, no war, no politics, no hunger, and little disease. Our Utopians are not greedy, envious, wrathful, lazy, or bedeviled with lusts. . . ."

"Come again! Every night there's a line outside my bedroom door, five deep. Not that I object, but, in the Land of the Pure it seems a strange thing."

HIS guide tried to conceal his smile. "It is because you are a visitor. A certain romantic charm attaches to your peculiar position. An aura. On the whole, our citizens are more moderate in their appetites. Puritanism, too, is a short-coming. You have been enjoying your stay, I take it?"

"Oh yes?"

"The food?"

"Excellent. I must have gained thirty pounds."

His guide nodded appreciatively at the visitor's girth. "You will find, as you grow accustomed to plenty, that even moderation has its pleasures. But I will not make sermons. Have you enjoyed the weather?"

"Just the right amount of zip. Your engineers are geniuses."

"Our schools and hospitals, our roads and public buildings?"

"In all those things, you are the paragon of the galaxy. And the private homes that I have seen are models of restrained munificence."

"They were selected at random."

"Of course, I knew long before my visit that your artists and scientists. . . ."

"Virtually the whole population," his guide put in.

"—are without peer."

"And yet you deny us the title of Utopia?"

"Utopia? Never!" the visitor said adamantly. "There's always a worm in the rose. I just have not found it yet, but it's there. Injustice is a part of human nature."

"What a shame! I had hoped that you would accept full citizenship."

"Full cit—" the visitor gasped, letting his 280 pounds settle slowly onto a teakwood park bench.

"Yes. But since . . ."

"Show me the papers."

"But as a representative of the Federation?"

"I renounce Federation citizenship. What do I sign?"

"Here. And here. And here. Good." He tucked the papers into a small leather carrying case.

"It seems to me that, with so permissive an immigration policy, New Katanga will soon be overrun."

"On the contrary, exclusivity would be unjust and, in the long run, unprofitable. A society always can use fresh blood. Besides, we have a stable population rate, all things considered."

"Well, I feel like celebrating."

"Why don't we take in the matinee performance at the Auditorium then. Admission, like everything else in Utopia, is free. The performances are quite hair-raising, something on the order of the Roman *Circus*, I'm told."

The new citizen raised an eyebrow. "In Utopia?"

"It's a healthy outlet for our small aggressions."

They walked up the marble staircase to the Grand Circle.

"Would you wait for me a few minutes in my box? I have some things to attend to."

THE visitor entered the box through a great door, heavily crusted with gold. His seat afforded him an excellent view of the arena. All the Utopians in the tiers above and across from his box stopped chattering and turned, as one man, to gaze at him. The new citizen recognized several women of recent acquaintance and waved to them. They waved back. One kissed her sheer gobbler-fleece scarf and threw it toward him. It billowed in the warm air of the auditorium and sank gracefully to the floor of the arena. There was restrained applause.

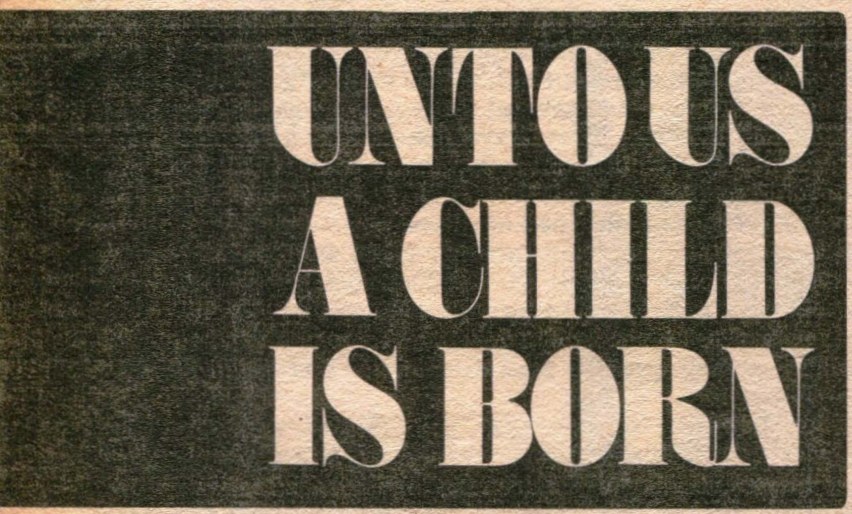
The lights dimmed. The entrance-gates at the far end of the arena opened with a clank. The gobblers bounded out with that curious, lithe motion so strange in creatures of their bulk. They circled the arena and came to a stop underneath the new citizen's box, where, lips pressed back from their terrible fangs, they mewled softly.

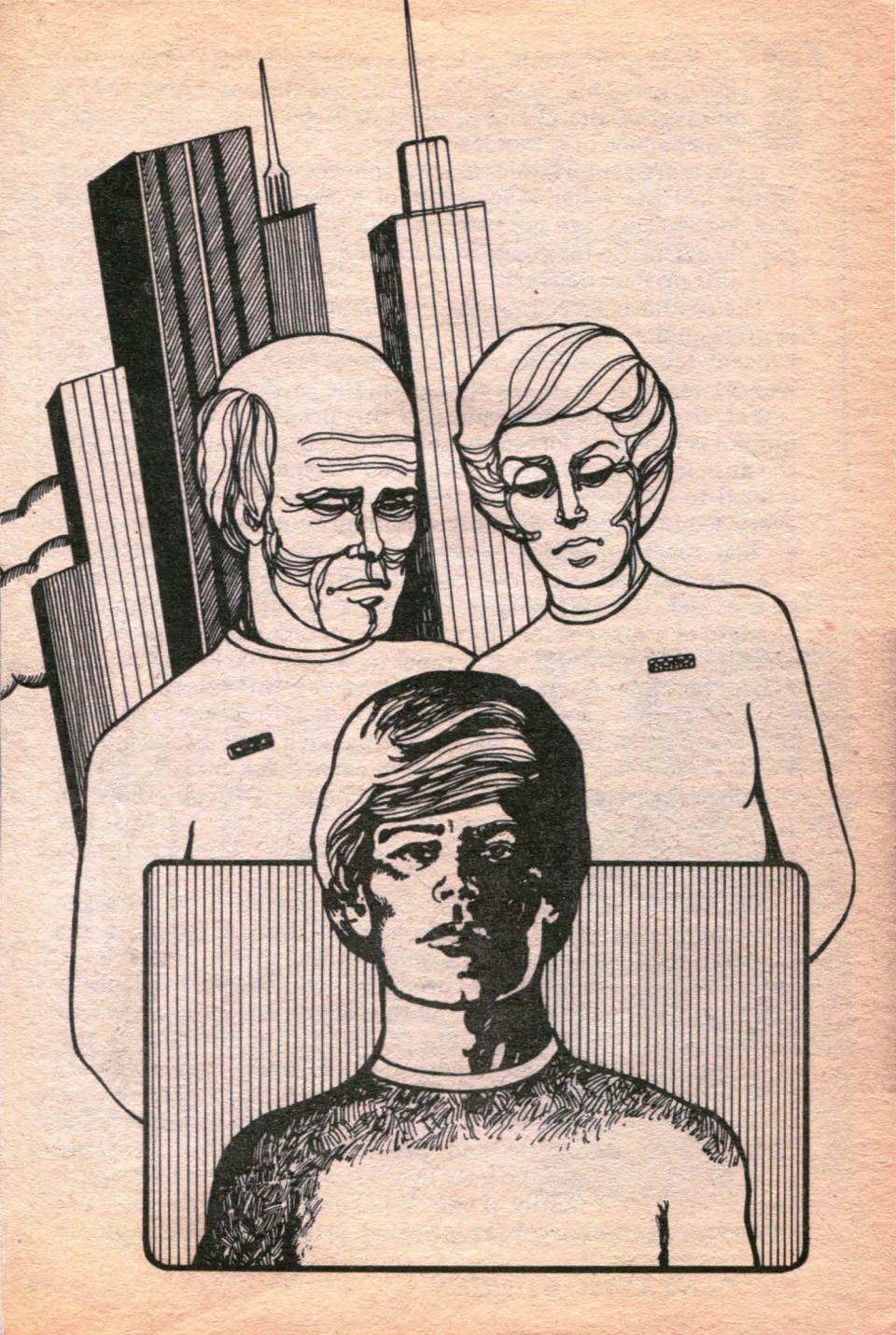
With an almost imperceptible *click*, the box was disengaged from its moorings and swung free over the arena. Then with slow, pendular motions it descended to the floor.

The audience cheered wildly as the gobblers leaped, like great-maned antelopes, over the railing of the box and tore the new citizen of Utopia into shreds. Even as they gulped down the huge chunks of fatty tissue, the spectators could see their fleece change from a tone of drab nickel to a sheen something between the glint of polished steel and the shimmer of watered silk.

by David H. Keller

1984 is almost here, and Big Brother is more subtle than Orwell predicted. If you think things could get a great deal worse, read what is going on in the year 2030. This should stir some latent misgivings about American political directions ... Big Brother is growing bigger all the time, doling out to you with his right hand, at the same time taking away with two lefts.





The Earl of Birkenhead in his recent book, THE WORLD in 2030, gives his idea of the life of that time and presents his opinion of the changes which will take place in the very short space of a hundred years.

Even more remarkable than his conceptions is the fact that the words are the sober statements of a prominent scientist and sociologist. They are not uttered with the fantastic manner and pseudo-scientific language of some of our modern prophets, but in a dull prosaic delivery.

The reader is forced, by the very manner in which the subject is presented, to feel that such changes in our social and economic life may take place. After all, they are not greatly different, in the wonder element, from the changes of the last one hundred years.

Yet, throughout the reading of this prophecy, the student of human relations is forced to feel, with a certain uneasiness, that the author has become so intent upon the marvelous, that he has tended to overlook the fact that the people of 2030, in spite of every scientific gain, will still be human beings, and that certain of their reactions will be very similar to those of their ancestors.

So we can well ask ourselves just what these people of this new year of 2030 will be thinking, just how they will be reacting to the changes of a super-scientific era? Will the emotions be wiped out? or will men and women still react to beauty, the love of life, the fear of death, and the clinging fingers of a little child?

Jacob Hubler, seventh of that name and direct descendant of that Jacobus Hubelaire, who had emigrated from Strassburg to Pennsylvania in 1740, had at last earned for himself a very satisfactory place in life. As Government Official, Class D, Division 7, No. 4829, Gross Number 25978432, he was now entitled to maintenance of the 5th type, which station made a man feel very comfortable.

He had earned that position by his inventions which made possible the artificial production of all food supplies in the individual home. Prior to his work in this dietary field, large laboratories in every city had produced synthetic food and meats, grown in large test tubes. The method was adequate in every way to the needs of the populace, but the manner of distribution was still antiquated. Hubler perfected a small but complete production laboratory, not much larger than the electric refrigerators of the past century. His product in its preparation was entirely automatic and practically foolproof. It would generate, day by day, and year by year, a complete and attractive food supply for a family of two. It not only created the food, but there was an auxiliary machine which prepared it for the table in

any form desired by the consumer. All that was necessary was the selection of one of the twenty-five menus and the pressing of the proper control button.

The inventions became very popular with the type of women who still took pride in their life; and when he added a service unit which automatically served the meal, removed it and washed the dishes, it was more than most women could resist. Thousands of women ceased to eat at the community restaurants and accepted home meals as an ultra-refinement. Hubler's name became a household shibboleth. The woman who had his three units in her home could serve three meals a day with no greater effort than the pressing of fifteen push buttons. It was ability as an inventor that placed Hubler in Class D, Division 7. The promotion carried with it certain rewards. It entitled him to complete support for the rest of his life, and it gave him the right to prolong that life to the age of one hundred and fifty years if he so desired. Most valuable of all, it gave him permission to marry.

Laws, Laws and More Laws

Years before, the State, realizing the important value of recent discoveries, passed laws which made the nation, rather than the individual, the sole owner and beneficiary of all inventions, especially those pertaining to the comfort of the individual, the welfare of the Commonwealth and the prolongation of life. Thus, the age of usefulness was rapidly advanced to an average expectancy of one hundred and fifty years, but only those who, by their performances, showed that they were of real value to the nation, were allowed to live on.

Similarly, the right to marry and have one child was carefully guarded by the State. Strict laws of biogenesis had been followed for three generations, and, as a result, the prisons and the hospitals for the abnormals had been made useless. These had been converted into nurseries and adolescent homes. Thus, a man and woman, under the most strict supervision, could marry and have one child, but only the most worthy were accorded that right.

However, if a man showed a real value to the nation, and it was determined that his child would also be of value, then he was allowed to marry, provided a suitable and scientifically proper woman could be found for his wife. No couple could have a second child till the first one had reached maturity and had been found to be normal in every way.

Hubler, at the age of sixty, was told that he could marry. He

was rather thrilled at the news. During the last few years permits had not been plentiful. With the prolongation of life and the increase of efficiency it was found best not to have too many citizens. So, for twenty years permission to marry had been given only to the men and women of the highest type. Thus, it was really an honor to marry. Hubler talked it all over with his first assistant, Ruth Fanning. She had worked at his elbow for twenty-five years and was nearly as old as he was. She, too, had ambitions.

"I think that it is wonderful, Mr. Hubler," she said. "You deserve the honor if any man does. Your inventions have made women desire homes and want to spend some time in them, and what is the use of having a home without a husband and a child?"

"It is kind of you to say that, Miss Fanning," the inventor replied. "You realize that much of the work would never have been done without your help and suggestions. I am proud of the honor, but I am not at all certain that I will ever marry. Just having the right is not all. They have to find a complimentary female for me."

"Oh! You are too easily discouraged. You, no doubt, will fall into an unusual group, but there will be some women in that group, and I am sure that one of them will be glad to have you for a husband."

"I hope so," he said, rather pessimistically. As an inventor of service units for modern kitchens he was bravery personified, but when it came to marriage, why, that was something different.

He only worked an hour a day, five days a week. Nevertheless, it was thought advisable to give him a month's vacation, during which time he was to take the various examinations and prepare for married life. On the second day of his liberty, he drove his car to the Central Marriage Testing Bureau, and, with more than a slight degree of hesitation, he entered the main office with all his credentials.

The Head of the Bureau explained the procedure to him.

"This may seem very complicated to you, but, in reality, it is simple. We examine you in every way and correlate the results. We then change everything into a mathematical formula, and this works out your final classification. After that all that is necessary is to find a woman with the same classification, have you meet one another; if you desire to be husband and wife we will allow you to marry. Of course, it takes time. Even the development of your personality—the taking of pictures and their proper study takes several days."

"One question," asked Hubler. "After I am typed, do I have to marry the woman you select for me?"

"Not at all. We give you a list of the unmarried eligibles of your special type number. Any one of these you select will be satisfactory to us.

"And the old emotion, love, does not enter into it? You see, I do not know. I am only asking for information; but in one of the old books I have, it speaks of men and women falling in love."

The scientist looked stern.

"That is the way it used to be. That kind of love produced the feeble minded, the epileptic, the dullard, and occasionally a genius. Under the modern method the birth and maturity of an abnormal child is not possible. You want your child to be perfect, do you not?"

"Of course! What father would want anything else?"

"Then, do not allow yourself to fall in love, as your forefathers did."

Personality

For the next week Jacob Hubler was an interested participant in the typing of his personality and body. Since he was an inventor, every step of the process was explained to him. At last all the results were ready for computer analysis and final mathematical rating. The Head of the Bureau studied the results very seriously and finally said, "Just as I thought, gentlemen; this is a new type, and I believe the one we have been anxiously looking for. It is positively new and adds a novel group to our known dominant factors. Would you like to look at it, Mr. Hubler?"

The inventor took the white pasteboard and read, TYPE Q — GROUP, X — DIVISION, 35 —***

"You notice that it is a three star card?" remarked the Head. "In the last fifty years we have had only the three star card occur nine times and no one has ever had as high a rating as 35."

"What does it mean?" asked the puzzled Hubler.

"It means that we can be certain that your child will be a philosopher, and at present the country needs one or two philosophers rather badly. Those we have are growing old and are not as inspirational as we should like them to be."

"Then I can marry and have one child?"

"No. That is the unfortunate part of it. You are a new type, and, consequently, there are no women of that type to introduce you to."

"Then my right to marry is just a hollow mockery?"

"Yes. You are so strongly dominant that it would be absolutely wrong for you to marry into another type. Still, the matter is not at all hopeless. We are making examinations every day. We may find your type any time."

"How many variations are there?"

"Over seven millions."

"Then, I might as well go back to work."

"No, go ahead with your month's vacation. We will make a special study of the female applicants from now on, and we may be able to find one for you. We may even shade the results a trifle and give you a break. Of course, that would be pure experiment, and might result disastrously."

Thirteen days later Jacob Hubler received orders to report at once to the Marriage Bureau. The Head of the Department was all excitement. He said.

"A most unusual thing happened yesterday. We have been testing and typing a very extraordinary woman and we suspected from the preliminary examinations that something novel would result. Her license to marry was over twenty years old, but she had never been tested. She explained that by saying that the man she wanted to marry did not have a permit; so, she decided to wait for him. A month ago he received his permit; so, she decided to be typed. To our surprise, she developed the same type and group you did, the new one. The only difference is that she is a four star person while you are a three star. She is the only four star we have ever had. Four stars show a wonderful mental maturity. The mating should produce the finest kind of a philosopher. We did not tell her about you. Thought it would be best to talk it over with you first. It is most unusual."

"It certainly is odd," replied the inventor. "What is her serial number?"

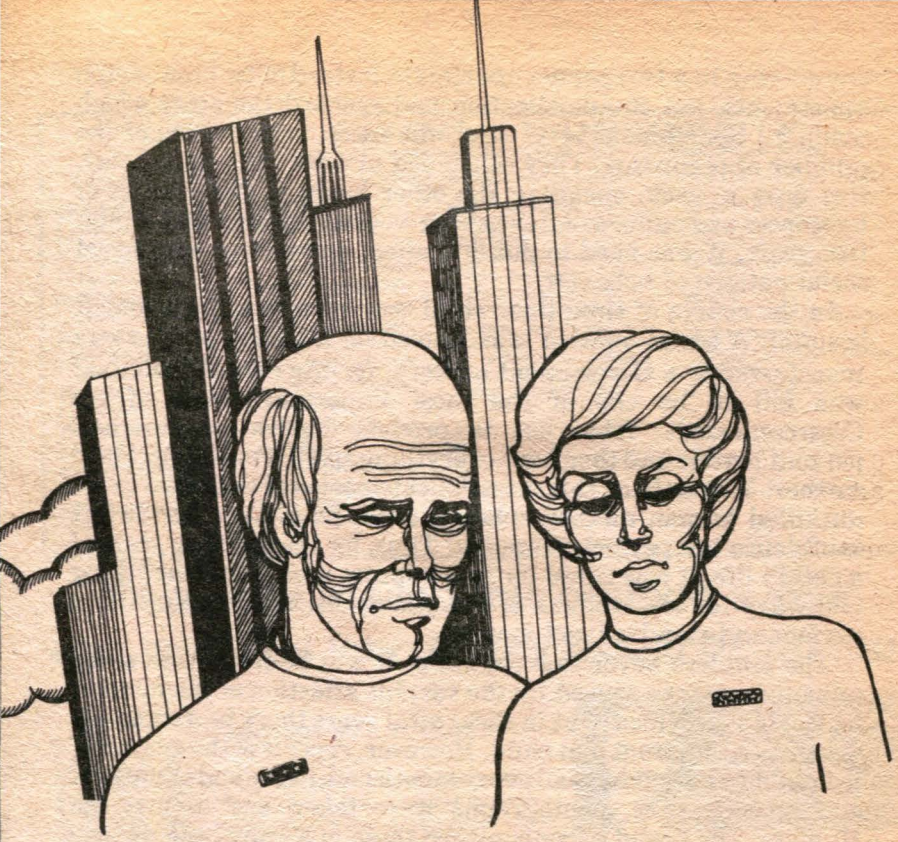
Ruth Fanning — the Baby

Government Official, Class D, Division 7, No. 4830, Gross Number, 259799987. Her name is Ruth Fanning. Ever hear of her?"

"Slightly." The inventor smiled. "That woman has been my first assistant for a number of years. I could have told you offhand, without any instrumentation, that she was a four star personality. But I never thought of marrying her."

"She is in the next room. Suppose you go in and talk matters over with her?"

Hubler was far more embarrassed than the woman who was



waiting for him.

"This is a great surprise to me, Ruth," he stammered.

"It is not to me," was her calm reply. "I had an idea that it would be like this."

"And you are willing to marry me?"

"Certainly! What did you think I had been waiting for all these years? I could not marry you till you had a permit, and were typed, could I?"

"But how did you know we were of the same type?"

"Womanly intuition," was her smiling reply.

They told the head of the bureau that they were willing to marry. After working together it seemed the proper and natural thing to do. He gave them the proper papers, they received the general treatment and started life in a two person apartment.

The Hublers returned to their work. Life was very much the same as it had been, perhaps a little more intimate, more in unison than before, but, in a large way, not much different. They

were living in a two person apartment instead of two one person apartments, but standardization had reached the point which made all apartments very much the same, irrespective of the number of occupants. They continued to work their hour a day, five days a week, spending the other hours in the pursuit of happiness and culture. After having worked together for twenty-five years, it was hard to put into effect any new or very novel social pattern of behavior.

In the course of time their child was born in a Government hospital. A serial number was tattoed on his back and he was transferred to a Government nursery, for the care of the infant was felt to be one of the most important duties of the Commonwealth. What use to produce babies one hundred percent perfect and then have everything spoiled by an untrained mother! Why entrust this most delicate period of existence to the unskilled human mother, when it could be given with perfect confidence to a perfect computer? Thus, for the first two years of a child's life, it was cared for by computer which did everything necessary for the welfare of the young citizen and did it in a perfect and standardized manner.

The Hublers never saw the child. It was believed that much unhappiness was caused by the surplus affection of the mother; so, the law provided that in these vital years there be a complete separation of parent and child. However, reports of the growth of the child were sent by mail every month and, at the end of the first and second years, photographs were taken and sent to the Hublers. The proud parents placed these in a baby book. If they fretted over not being permitted to see their child, they did not confess it to each other; they realized the advantage of such a life to their son and were willing to make any sacrifices necessary for the future welfare of the baby.

At two years the Hubler boy was walking, talking and able to dress and undress himself. He had an intellectual quotient of three hundred which meant a mental age of six years. At that time he was taken out of the nursery kindergarten and placed in the grade school. There, all the teaching was done by computer, standardized in every respect. Contact between the young pupils and older adults was rare. While there were periods of relaxation and play for the young student, life as a whole was rather serious.

The education was varied according to the predetermined future of the child. If a boy was to become a musician, why give him the preliminary training necessary for the development of a scientist? Thus, each child became a specialist early in life, and many valuable years of existence were saved.

The Hubler boy advanced rapidly. At eight years he was past the help of computer instruction. From then on he received the personal guidance of the few remaining philosophers, for it was early found that his mind was suited for philosophy and not for very much else. At ten he was a beautiful boy, but such a deep thinker about things which no one else had ever tried to think of before, that he was both a trial and an inspiration to his professors.

The Meeting

At the age of 16 his maturity was recognized, and it was thought advisable to give him a name, make him a full citizen and assign him to a government position. The parents were asked to select a name, and naturally, they selected Jacob Hubler, Junior. They were delighted when they were told that he had been made Assistant Professor of Philosophy in the National University, and given full citizenship. A free unit of society, he could now do as he wished with his time, the only restriction being in the hour a day five days a week rule for all government employees. The first thing he decided to do was to visit his parents.

So far they had not seen him.

But they were prepared for the happy event by moving into a three person apartment. It was very much like their two person apartment only a little larger and with an extra bedroom.

Jacob and Ruth Hubler could hardly wait for their son's arrival. They had his baby book out on the table; they wanted to tell him of their marriage, show him the reports and his baby pictures. They wanted him to know what his birth had meant to them and how they had loved him all these years. They did not look a day older than they looked thirteen years ago but, somehow, they felt more important and quite advanced in years.

Their boy was coming home to them!

Their son! The culmination of nearly a century.

At last, he came. A young man with a beautiful body and wonderful intelligence. He greeted them without emotion, talked to them without effort. Recognizing them as his parents, he spoke only of the debt the individual owed to the state. He was courteous and polite, but, in some way he did not seem to be interested in the things they were interested in. Jacob, Senior spoke of his new household inventions; Ruth told of her part in the work. He, the young philosopher, looked a trifle bored and talked of Erkenntnisstheorie and the undue subjectivity of temper. At last he rose from his chair.

"I Must Go to China"

"I must go," he said in a tone of polite apology. "I have an important engagement with a philosopher in China. I must take the next rocket express for Canton. He is an old man and it is very important that I confer with him before he dies."

The mother put her hand on his shoulder and whispered timidly.

"Won't you spend the night with us, Jacob? I made your bed myself, and your room is all ready."

"I am sorry, but I have this appointment and must go."

"Well, come again and as often as you can," said the father rather cheerily. "Always glad to see you, my boy."

Jacob and Ruth went out on the balcony of their apartment. It was on the two-hundredth story and overlooked Greater New York. They stood there, and, somehow, his arm stole around her waist and her head dropped on his shoulder. He touched her cheek as he whispered.

"That is a fine boy. Sure it is great to be a father."

She shivered in his arms.

An Important Communication and the Result

"I am cold," she said. "The autumn is past and there is a chill of winter in the air. If you will pardon me, I will go to bed."

For a long time, Jacob stood there on the balcony, alone.

Once he was back in the living room he took from his pocket a Government communication. It was from the Child Permit Department.

"YOUR SON, JACOB HUBLER, JR. HAS FULFILLED IN EVERY WAY THE EXPECTATION OF HIS PRENATAL CHARTS. AS A PHILOSOPHER HE IS A SUCCESS. BUREAU OF STATISTICS ADVISE US THAT THEY NEED SEVERAL MORE PHILOSOPHERS. THIS LETTER IS YOUR OFFICIAL PERMIT TO HAVE ANOTHER SON. REPLY AT ONCE DESIRE OF YOUR WIFE AND SELF CONCERNING THIS."

He read it over several times. At first it seemed to be hard to understand. He had been so busy improving the standard kitchen equipment that he had given but little time to other matters. Still holding the letter in his hand he went over to the central table and opened the baby book. He looked at the first few pictures and then could not see very well because of the film over his eyes.

Closing the book he went over to the wall wireless and tapped out a letter in reply, addressed to the Child Permit Department. One sentence was the answer, one sentence and the name, and the message read,

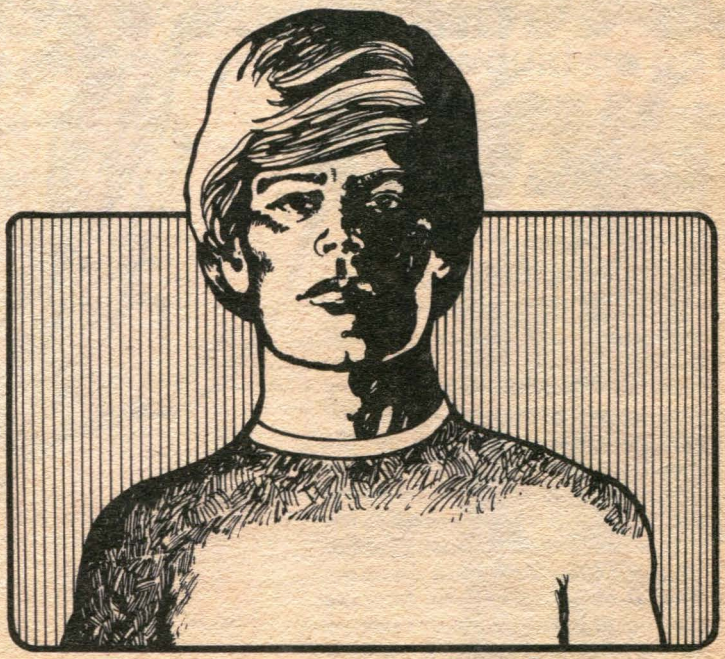
WE WILL NOT HAVE ANY MORE CHILDREN. JACOB HUBLER

He walked as quietly as he could to his wife's bedroom door.

Her room was dark and he could hear her sobbing in the darkness.

He went in and touched her hair.

Wanting to comfort her, he did not know what to say. The world was no longer "all before them." ●



A World of Whispering Wings

by Rog Phillips

One of the prerequisites for treks to the stars is some form of anti-gravity or FTL space drive. If man achieves this, he risks experiencing Einstein's discovery that traveling at such speed will slow the passage of time for the space traveler while the world continues on at its same old merry pace. Our heroes here have taken the plunge and are on their way back to an earth that has spun on some 3000 years ahead of them. Imagine what could happen over such a stretch of time. Suppose something has gone haywire with the evolutionary process because of radioactive contamination ... it could be almost like visiting some alien planet ...

THREE THOUSAND hours to Earth," Dr. Lansing said, "and we've been away three thousand years. Home. . . " He grinned, his blue eyes twinkling under his shock of iron-gray hair.

"Home?" Ted Grant said. "Maybe it was to my great-great-etcetera grandpappy. But I wonder how we'll feel there. Anyway, I hope you're right as usual, you old thinking machine. Just think, Andy." He turned to Andy Thorne, the other occupant of the room. "Glamor girls from Hollywood, or its modern counterpart. And we can have our pick of them, too. We're bound to be glamor boys to them. Back from the starways.

"That's the trouble with you young unmarried people," Lansing admonished. "Marriages have dropped eighty-seven per cent this last year over the previous year. And it's all because you young people are dreaming of romances when we land."

"Can you blame us?" Ted persisted. "Bet you wish you were young yourself. Me—I'm going to find a cute Earth girl and see the life there. You'll probably be closeted with Earth scientists, talking over percentages. Or maybe they've advanced so much in science you'll have to go to school all over again."

"That's possible," Lansing said. "Here on the *Astral Traveler* we haven't made too many advances in theoretical physics in three thousand years. On the other hand, civiliaztion wasn't too firmly established when we left. . . . We should be raising Earth on our radio soon."

Thorne snorted. "Wouldn't it be funny if after coming all the way back to the Solar System we found that life on Earth was gone?"

"It isn't gone," Lansing said. "You've seen the Earth through the telescope. It's substantially the same as the pictures of it. There's been no catastrophe big enough to wipe out all mankind."

The intercom loudspeaker clicked audibly. The three men looked up at it, waiting for it to speak. "Dr. Lansing," it said, "will you please come to Control Center at once?"

The gray-haired scientist picked up the hand mike on his desk and acknowledged the call. "Maybe this is contact," he said.

But when he returned an hour later he was frowning. He shook his head in answer to Grant's and Thorne's questioning look. "I think something has happened to the Earth," he said. "We're skirting the Earth's shadow and taking spectros of sunlight that has passed through the Earth's atmosphere. The absorption spectrum shows some disturbing things. We don't know what to make of them yet."

"Like what, for example?" Grant asked.

"A seventy-five percent increase in carbon dioxide and a ten percent decrease in oxygen content. That indicates either a tremendous increase in vegetable matter or a disastrous decrease in animal population, including man, or both."

"What else?" Grant said.

"There's an appreciable dark line indicating carbon fourteen, the unstable isotope. There shouldn't be. That means there's an appreciable part of a percent of that isotope in the atmosphere as carbon dioxide. And that's impossible, unless. . ."

"Unless what?"

"Unless there's a gigantic selective reactor in operation on the Earth," Lansing said. "It would have to be designed for the purpose, and it would have been in operation for at least a thousand years. It could have been built with the knowledge Earth had when we left in 1982, but it would take an insane group to actually build it."

"WHAT DO you mean?" Thorne asked. "What could it do? You mean it would make so much radioactive carbon that life would be destroyed by the hard radiation?"

"No. Not enough for that. No danger of that. What I mean is that each C-14 atom would be a small bomb liable to explode at any time. In the heart of a living molecule, especially the sperm or egg, it could do anything from destroying the fertilized egg to altering it so that the resultant organism would be malformed. Mutated."

"There's enough for that?" Thorne asked.

Lansing nodded grimly. "The most accurate estimate we can make is that one seven-thousandth of the Earth's carbon is C-14!"

"Then there won't be any human life on Earth?" Grant said, disappointed. "But there must still be people on Earth Station. It's out of range in it's orbit outside the atmosphere."

Lansing was shaking his head. "We're close enough to see it in detail now. It's riddled. It was close enough to the Earth so that space debris had a penetrating velocity due to the Earth's gravitational attraction. As long as its electronic repulsor setup operated, it was safe, but somewhere along the line something happened. I'm afraid we've come back to something we should stay away from. We should turn right around and go back to Alpha Centauri." He grinned at their expressions. "But, being human, we won't. The Council has decided we'll investigate."

"That's more like it!" Grant exclaimed.

"Don't be in a hurry," Lansing smiled tolerantly. "We'll repair Earth Station first and place some of our overcrowded popula-

tion on it. We'll also probably build a smaller ship for the actual landing. It may be a year before we can stand on the land of our home planet. And neither of you may be in that landing party."

"If I'm not," Grant said, "so help me I'll—I'll parachute down *A WOL.*"

"That's what I mean," Lansing said, frowning. "You're prone to disobedience. You have a record for it. Still, if I have a say in it, I'll see that both of you are in on the landing."

THE LEAVES whispered softly, almost inaudibly, as the dawn breeze came to life. Whispered, and then became silent. In the silence sounded the distant plaintive call.

"Bah-loo. . ."

The leaves whispered again, an undertone of officious self-importance in the sound. Balu, hearing it, permitted the beginnings of a smile to quirk her lips.

The breeze, as though encouraged by this sign, shifted slightly, washing against dew-studded fruits. Its new approach was rewarded by a quivering of sensitive nostrils and a further widening of the smile.

The leaves rustled expectantly. Balu rose lazily to one elbow, stretched one wing sleepily until it was fully extended, reached an arm along its forward edge until short-fingered talons touched it, their points a scant inch from the elbow where the wing began to sweep backward.

In almost a continuation of the movement she sat up, instincts maintaining her balance on the six-inch-thick branch. Not until then did she open her eyes, and then abruptly, their smoky violet orbs only partly revealed by the elongated tear-drop frames of jet lashes which began at the edge of either temple, curving around to terminate at tear ducts inherited from oriental ancestors.

"Bah-loo. . ."

She seemed not to have heard the far-off cry of pleading and protest as she sat on the branch, her long graceful legs swinging, her violet eyes taking in the myriad silver flashes from the underside of the leaves as they were stirred by idle air currents.

A wide yawn revealed even white teeth, a firm red tongue. And then with lazy grace she reached upward with her wings and brought them down swiftly, lifting herself up. Taloned toes, long and powerful like those of a gorilla, seized the rough bark of the limb.

From her impudently pug nose to her overly wide but feminine shoulders, from her softly rounded breasts to her narrow waist and smoothly curving hips, she might have been a girl alone in

the privacy of her room. A girl with rich brown hair cropped in a boyish bob, with overly mascaraed eyes. A girl whose firmly molded features were as caucasian as her eyes were not, whose expression mirrored innocence and unselfconscious contentment.

For the barest instant she poised. Then she dived headlong from the branch in free fall, wings trailing, legs doubling up until knees rested together against her breasts.

The wings came to life now, reaching forward to seize the invisible air and toss it backward and downward in skilled thrusts, while the slim arms curved forward and strangely animal hands seemed ready to protect the face against any unexpected obstacle.

Her head was tilted backward, slitted eyes into the wind, smoldering violet fires lurking in their depths. On her face was still mirrored the expression of contentment and innocent unconcern. Nor did it alter in the slightest as, a third time, the protesting and bloated roar, "Bah-loo!" erupted through the forest.

Before the echoes of that angry wail died she was gone, leaving only the whisper of the leaves.

"God!" Andrew Thorne said with soft reverence into the microphone of his spacesuit.

TED GRANT heard the one-syllable prayer and looked down between his knees through the two miles of space toward the approximate spot where Thorne had dropped. "Find anything yet?" he prompted hopefully.

"No," Thorne's voice came. "I was merely extolling over the beauties of the landscape down here."

"Yeah ? I think I'll drop this eggbeater down to where I can do some extolling myself."

"No!" Thorne's voice was sharp. "It might frighten her!"

"Her?"

"Damn," Thorne muttered. "All right, I just saw one of them. But she flew away. I'll have to find her again."

"Flew?" Grant's tone was skeptical. "Angels yet? Good lookers I trust?" When there was no answer from Andrew Thorne, he switched to long distance broadcast. "Grant calling ship," he intoned.

"Go ahead, Grant," the answer came immediately.

"Thorne located one of them. It flew away. From his reactions it was female, young, and beautiful."

"Did you say flew?"

"That's what I said. Flew."

There was a moment of silence. A new voice came on. "What type of machine did it fly away in? This is most amazing. It never occurred to us they still had a machine civilization."

"I gathered that it didn't have a flying machine," Grant said dryly. "Wings. Just wings."

"Even more remarkable," the voice said. "Relay to Thorne that he must get a pair of them at any cost. Spengler was right. These people, left to themselves, have developed a technology peculiar to themselves. From those wings we may be able to deduce their entire science, from mathematics to plastics. We must get a pair of them at any cost!"

"From Thorne's reaction," Grant said patiently, "I should imagine that if you want a pair of the wings, you'll have to take their owner too. You see," he took a deep breath, "she grew them. At least I think that's what Thorne implied."

"Grew them?" The question exploded through the loudspeaker and was followed by a silence pregnant with surprise. "Impossible! The human features couldn't alter enough to enable them to gather food without the aid of hands. In any mutation that changed the arms to wings, the person would have to be fed continually by hand, or starve to death."

"I wouldn't know," Grant said. "Want me to connect you with Thorne?"

"Yes."

Grant adjusted the necessary switches for a three-way contact and listened . . .

"Let me get this straight," Dr. Lansing's voice said with the patience a professor exhibits toward a particularly stupid student. "You say the wings are attached to the back? Then they are obviously mechanical."

"No," Thorne said with the dogged stubborness of a backward student. "When she woke up she stretched them. They aren't mechanical."

"I'm sure you must be mistaken. But keep looking for her. I'm coming over. And Grant, you stay where you are so I can find the place. Is he hovering directly above where you are, Thorne?"

"Approximately. Maybe a quarter of a mile to the south. But I told you she flew away, and I haven't been able to find her."

"She won't have gone far, I'm sure. Wings such as those would have to be refueled often for prolonged flight. No—I know you're convinced they grew. But I assure you that's impossible, even with the C-14 action. You'll see. Keep looking for her. I'm going to leave the ship now."

Grant heard Thorne's deep sigh, and grinned his amusement.

"BAH-LOO. . ."

Andrew Thorne frowned in speculation over the strange protesting call. It might have been that of some wild creature, except for the sharply accurate enunciation of vowels and consonants.

It was more than possible he decided, that it came from a human throat. Since there was no way of knowing where the girl had flown, he made his way in the direction from which the call had come.

Shortly the terrain changed from the solid mixture of dirt and decayed though dry vegetable matter to a clinging muck that was treacherously slippery as well as clinging. The sparse shrubs and grasses were replaced by a plant that seemed to consist only of fine green threads that lay on the surface of the mud and snarled around his boots when they skidded.

Finally he became unsure of his directions and paused to rest and wait for the call to be repeated. He had a good five-minute wait before it came, and then it seemed to come from a different direction and be farther away than before.

Disappointed, he turned to make his way back to secure ground again.

Without warning he was struck from behind. He fell sprawling and instinctively rolled to his back, fumbling at the catch that would release his hip gun while his eyes searched for the source of danger.

His fingers suddenly froze into motionlessness. On a limb of a nearby tree the girl was poised ready for flight, her back to him, her head turned so she could watch him a half-curious, half-afraid smile on her lips.

"Hel-lo!" Thorne breathed, rising in slow movement to a sitting position.

"Hello!" She might have known the meaning of the word or merely repeated the sound. Her voice was clear, well modulated, and entirely feminine. Thorne found himself wanting to hear it again.

"Don't be afraid of me," he said.

"So you *are* a visitor," she mused. "I wasn't sure. I've never seen a visitor." She lifted herself with a movement of her wings, turning to face him, and in a smooth movement seizing the limb with taloned toes and squatting, hugging her knees and resting her chin on them while her smoky violet-slitted eyes regarded his with frank curiosity.

"So you can still speak!" Thorne stood up slowly.

"Of course," she said. "Our sworn duty is to preserve the

language." She paused, then added, "And help one another."

"Do you have a name?"

"Balu." She smiled.

"Balu?" Thorne said. "So that was someone calling you!"

"My brother. Do you have a name?"

"My name's Andrew Throne. You can call me Andy."

"Andy. I like that. Your shape is strange. Is that why you are here?"

"I'm wearing a space-suit," Thorne explained, "I have to keep it on because of the C-14 in the atmosphere."

"The C-14?" Balu said. Only she pronounced it *Cif-Fortean*, with a quiet reverence.

THORNE was left with his mouth open as the implications of her tone penetrated. He changed the subject. "Why did you push me over just now?" he asked.

"To have opportunity to see how you behave," Balu said. "I think I like you. I'll come down and let you pet me if you wish to." Without waiting for his reply, she slid off the branch and with two deft swoops of her wings stood erect less than four feet from him, as unconscious of the effect she produced as a little child.

Thorne's spacesuit was suddenly intolerably hot and stifling. He took a step forward, and stopped as his eyes were drawn in hypnotic fascination to hers. She matched his stare, as fascinated by his. They remained that way seconds or minutes. She took a timid step toward him, reached out and touched the chest of his spacesuit with her almost entirely animal paw of a hand.

Awareness of self flooded over her suddenly, changing the delicate pink of her skin to a flushed red.

Once again Thorne was shoved sprawling to the ground, this time on his back. As he fell she turned away, darted a smile at him over her shoulder, and leaped into the air.

He watched numbly as her huge wings scooped upward to carry her out of sight before he had time to call to her. A melodious embarrassed laughter drifted back to him through the trees.

"Balu!" he called. "Come back. Please!" He bit back any further call and got to his feet. "That little devil!" he muttered.

"Sounds more like an angel to me," Ted's voice sounded.

Thorne choked back an angry reply and searched with slowly dwindling hope for some sight of Balu through the trees. Instead there came a now angrily indignant call.

"Bah-loo. . ."

It was repeated with an almost sobbing undertone. It was

louder and closer than it had been, but seemed to come from no definite direction.

Andrew Thorne felt, abruptly, a great emptiness, a terrific loneliness, an aching yearning, for what he couldn't define. But all that met his searching eyes was the mocking flashes of the silver undersides of the leaves of the trees and the thick twisted branches, and the only sound was the slightly brittle rustle of the leaves as they were moved by the morning breeze.

TED GRANT, using powerful binoculars, had located the bright reflective flash of Thorne's headgear. When Balu fled he was able to follow her flight until she came to a stop a good half mile from Thorne. She was in a small clearing. He watched for a moment and decided she must be picking berries and eating them.

He grinned to himself, shut off his contact with Thorne, and raised Dr. Lansing. "I think it advisable for me to put my gyro on autopilot and go down, sir," he said. "The girl got away from Thorne. I can see where she is. I could reach her in five minutes."

"Keep her in sight and wait until I get there," Lansing's crisp voice ordered.

"I don't think that wise," Ted said. "She's moving about slowly and I'll probably lose her. Better for me to go down."

"All right then," Lansing consented.

"Thank you, sir!" He switched Thorne on again. "Lansing's ordered me down. I was able to follow her flight. She's a couple of miles away from you toward the northwest. You can contact me suit to suit now."

Not waiting for an answer, he shoved in the autopilot, opened the hatch, and dove out.

Now his attention was concentrated on the clearing where he had seen Balu. With the skill of experience he guided his fall in that direction. He planned to land in plain sight of the girl. She had already seen one spacesuited figure and therefore would be less afraid. Since Thorne's suit had red trim and his had blue she would know it wasn't the same person.

He loosened the safety flap over his hip gun holster while eager anticipation shone in his eyes. He had no intention of letting Balu get away from him.

Af five hundred feet he was directly over her. At fifty feet he released hydrogen into the deep cups of the chute to give them buoyancy. He touched the ground at a speed of three feet a second, so silently that Balu wasn't even aware of his arrival.

Her back was to him. He pulled the snap that released his

chute and it rose slowly toward the treetops. He didn't watch it rise. His eyes were taking in the details of the unbelievable figure of Balu, her long slim legs, her narrow waist, the way the long and powerful wings hinged where her shoulder-blades should be, but so naturally and so beautifully that it was impossible to regard them as abnormal.

AS HE studied her he debated what to do. Should he wait until she turned and saw him? She might take to flight without ever doing that, and he couldn't follow her. Nor would he dare shoot her down. The fall might injure or kill her.

He studied her short tousled hair with its careless rich brown waves, her small ears that seemed almost ornaments to hold errant curls in. He came to a sudden decision. "Balu," he said softly.

Her head went up like a wild animal's and became motionless. She was poised for flight. When he made no further sound she half turned her head. He sucked in his breath at the weird mixture of races blended into her profile. Seeing him, she turned further toward him.

"Why, you're beautiful!" he breathed in surprise.

"You aren't Andy."

"No. I'm Ted. Don't be afraid of me. I won't hurt you. You—you're so beautiful. . . . Your eyes. . . I've never seen eyes like yours."

"Some of your words I don't know," Balu said. "Beautiful? Wonderful? Do you mean you think I'm pretty?"

"Yes. Pretty."

"Thank you. You may pet me if you want to." She advanced toward him, her expression coaxing, bright lights in the smoky violet depths of her widely slitted eyes.

"If I want to!" Ted said.

He reached toward her. Abruptly her wings moved, lifting her up and backward. A teasing laugh escaped her lips.

Ted, mistaking her maneuver as an attempt at escape, leaped toward her. His arms encircled her. Surprise held her unresisting as she stared into his eyes.

"I'm going to let you go in a second," he said. "Before I do though I want to make sure you understand that I won't hurt you. Do you understand that?" She nodded. "And you won't fly away?" She hesitated briefly, then shook her head. "All right, you've promised," he said gruffly, releasing her.

She backed away a step, her expression half subdued. Ted

found he was panting and his heart was pounding against his ribs.

He reached out and touched her face with his glove-encased hand. Balu smiled shyly but didn't back away.

"I'm going to take off this spacesuit," he said.

"Can you?" Balu said in surprise. "Andy told me *Cif-Fortean* wouldn't let him."

"God! I forgot about it!" Ted said. He groaned. Then he grinned. Reaching out and wrapping his fingers around her wrist, he said, "Come on, Balu. Let's go find Andy. Before I forget I'm a gentleman and make a pass at you." He grinned and reached for her wrist.

Playfully, she eluded his grasp and pushed at him, her wings starting to lift her into the air. Then she paused and returned to him. He laughed and imprisoned her in his arms, pressing her tightly against his spacesuit and wishing it weren't there. On impulse, he reached up, turned the transparent helmet half way round and took it off. Holding it in one hand, he pulled her toward him with the other, and kissed her full on the lips. "Well," he teased, "guess not everything on Earth has changed. With a little practice, baby, I could almost go for you, claws and all."

She stood quietly watching, with a dreamy smile, as he put the helmet on again. Her nostrils wrinkled when he opened the manual controls on the air tanks to blow out the C-14 from the suit. When he was satisfied, he turned them back to automatic again and took her hand in his.

Her wings beat and threatened to lift them both into the air. Laughing, he said, "Here, none of that. Stop it."

"Let go of Balu!" It was Thorne's voice, frigid with rage.

Ted turned his head and saw Thorne already leaping toward him. He released Balu and jumped aside, shouting, "Take it easy, Thorne. Take it easy."

Thorne came to a halt in his headlong charge. "You—you dirty swine!" he gritted. "You fool! You crazy fool! What do you think you're doing? This is no ordinary girl."

"Damn you!" Ted said, leaping forward. He squared off at Thorne, fists doubled. "Don't you try to tell me how to act!"

Neither noticed Balu rise on silent wings and perch on a nearby tree limb. They were glaring at each other, oblivious of everything else.

"Stop shouting!" Dr. Lansing's voice interrupted. "Look up. I'm only a hundred yards above you."

With a wary glance at each other, they looked upward and saw

the space-suited figure of the scientist descending with his tendem chute taut above him.

AN EXPRESSION of disappointment had flashed over Balu's face at the cessation of what had promised to be an exciting fight, to be replaced by interest in the figure now landing. That interest was reflected on Dr. Lansing's face also. He released the catch that sent his parachute drifting away without even seeming to be aware of doing so. His eyes were taking in the details of structure, the wings, the strange eyes of Balu.

Thorne and Ted stood in scowling silence while this inspection went on.

"You aren't afraid of us?" Lansing asked. Balu smiled and shook her head quite vigorously. The scientist added, "What a beautiful mixture of the real and the impossible! Tell me, are there more like you here?"

"I have a brother," Balu said.

"Where is he?"

"Out there." Balu pointed vaguely. "He isn't much like me."

"Are there others?" Lansing asked. "People with wings like yours?"

Balu shrugged indifferently. "Maybe." But there seemed to be something akin to fear lurking in her eyes. Lansing saw it and changed his mind about something he was about to say.

Instead, he turned to Thorne and Ted with a grin. "If you two were fighting about her," he said, "get over it right now. . . ." His voice drifted off. Balu had glanced upward and let out an involuntary gasp, then darted into the concealment of the branches. He looked up.

At first all he could see was the two helicopters hovering at five thousand feet under autopilot, ready to come down by radio control when they were needed for takeoff.

Then he saw a flash of white. His eyes adjusted to it. It was a flying human, legs drawn up against its chest. He saw another and another, until he could make out at least five. They were at three thousand and climbing.

It was Thorne who divined the intention of the flying men. "The ships!" he said. "They're going up to the ships!"

"They will wreck them," Balu said calmly.

"She may be right," Lansing said. "If they board the ships and switch them off auto they'll crash. We'd better bring them down."

He touched a gloved finger to a stud in the chest of his suit and started uttering sharp explosive repetitions of the word *dot*. Ted did the same.

The two helicopters responded by starting to drop rapidly. The winged men moved to intercept the ships.

There began a strange duel in the sky as the two men on the ground maneuvered the ships this way and that, and the flying men darted this way and that to intercept them.

Suddenly one of the flying men was struck by a lift blade which broke one of his wings and half severed it. The ships and men were less than a thousand feet overhead.

A moment later a faint scream drifted down. Two of the others had dived after him and caught him in his fall. They continued dropping until they were out of sight. Seconds later, having deposited their wounded companion in safety, they rose in zooming flight to join the other two in their attempts to board the two ships.

"If they succeed we'll be stranded for days," Lansing groaned. "Our suit radios won't reach the spaceship."

And even as he said it, two of the flying men darted in from underneath and found secure holds on the undercarriage of each ship. Both Ted and Dr. Lansing maneuvered their ships, trying to throw the winged men off, but they were dealing with men who were accustomed to violent flight. In a moment it was all over. The flying men had gained access to the interiors of the ships and thrown out the autopilot control.

As the ships ceased to respond to remote control, the three men on the ground stood still, watching as the two flying men darted away to join their two companions and watch the ships veer out of control and plunge downward.

"THIS IS awful!" Dr. Lansing said ineffectively. "Our air cycle might exhaust itself before we're found."

"Let's find the ships," Thorne said. "Maybe we can fix one of them. Or maybe we can work one of the radios and contact the spaceship."

"The flying men were no longer visible in the sky. Either they hadn't seen the three space-suited figures on the ground, or they didn't care to investigate them.

Balu cautiously came out of concealment. "I'll help you find your ships," she said.

Lansing looked at her, frowning. "I wish you had some clothes to wear," He mumbled.

"Clothes?" She laughed delightedly. "I know about clothes. I will get some."

She leaped into the air and darted away.

Lansing watched her go. When she was out of sight he turned

abruptly to Thorne and Ted. "I want you two to listen to me," he said sternly. "I'm in command. Nobody issues orders here but me. What I say goes. And I want to warn you—I'll tolerate no messing around with this Balu, either. Maybe her ancestors were human, but she's not. If one of you succeeded in mating with her, your offspring would be monstrosities. More than likely they'd be born with their brains outside their skulls like radiation-blasted white mice have been. I won't stand for either of you playing around with her. She's not a toy to be experimented with. I want her to be left alone. Do you understand? If not, I'm going to see that you get full demotion and penalties when we get back to base ship. We're here for routine inspection. And Ted, you particularly—no Don Juan stuff like you're noted for among our own peoples."

"Are you sure you aren't exceeding your authority?" Ted asked softly. "After all, I'm the senior officer on this jaunt. My orders take precedence over those of a civilian scientist. I shall do exactly as I please."

"We are three," Lansing snapped. "Theodore Grant, you are under operational arrest. In the presence of Andrew Thorne, I invoke Articles of Space, Section 14A, Code BF, Item 7.18. Until we return to the ship you are not to speak except to answer specific orders. The slightest infraction of your arrest will be answered by total paralysis. Is that clear? I will take no chances with you."

"Yellow," Ted sneered as he started his hand toward his gun.

Lansing brought out his hip gun. "That will do," he said. "Mr. Thorne, disarm the prisoner."

The sneer on Ted's face remained as he elevated his arms and permitted Thorne to take his hip gun.

Thorne turned to hand it to Lansing. "Out of the way!" Lansing shouted, then groaned. Thorne turned quickly and saw Ted dropping his helmet to the ground.

"Might as well take my suit too," Ted said. "I'm staying here." He inhaled deeply. "C-14 contamination won't be so bad when I get used to it."

"Do you like me now?" Balu's gay voice broke into the consciousness of the three men like a shot. They turned and gaped at her.

She had taken three leaves from a tree and fastened them in place with long strands of grass.

LANSING sucked in a breath and turned back to Ted. "Put

your helmet back on and evacuate your suit or you get paralysis right now."

The sneer came readily to Ted's lips. "Go ahead. You won't dare keep me under permanent paralysis more than a day or two."

Lansing's lips compressed with determination. He made sure of his aim and pressed the contact stud of his hip gun. Surprise started to mold Ted's features and was arrested half way.

Lansing holstered his hip gun. He caught Ted's limp form before it hit the ground. Easing it down, he got the helmet and put it in place. Then he took the cover off the emergency suit controls and operated them until he was sure all the contaminated air was ejected.

Looking up at Thorne he said, "I don't think he could have gotten enought to do any damage."

"What did you do to him?" Balu asked.

"He was insubordinate," Lansing explained. "He shouldn't have taken his helmet off."

"Why not?" she asked. "Why don't you take yours off? Why don't you Andy? Ted did, and kissed me. I wish you would." She smiled archly, the flirtatiousness of Cleopatra appearing again through the lost centuries, in this creature with the beautiful face, wings and claw hands.

"You mean he took it off before this time?" Lansing said.

When she nodded, he stood up. "The fool," he said. "The poor benighted fool. This planet does things." He looked pityingly at Thorne. "Don't let it affect you too, son. Life patterns gone crazy, every individual born here the first and last member of a unique species in the constant reshuffle of infected gene structures. . . ."

Thorne averted his eyes. He looked at Balu, tried to turn away, then let himself look directly into her violet, alien and yet somehow not alien eyes staring invitingly from behind their broad almost curtains of lids.

He jerked his eyes away. "We'd better get to the ships, sir," he said gruffly. "I'll carry Mr. Grant."

THE TREE trunks rose twistingly to become many crooked limbs that climbed still higher until they were lost in the silver blanket formed by the undersides of their leaves. Occasionally there was a break that revealed the blue sky and billowy bleached clouds. Sunlight streamed down in broad staircases.

There was no sound other than the heavy breathing of Thorne from the exertion of carrying Ted's lax form, the scuffling of his and Lansing's feet through the tough grass, and the sounds Balu's broad wings made when she darted overhead, keeping

pace with them.

On Thorne's face was an expression of bitterness that reflected his inner and unsucessful attempt to draw his thoughts away from Balu.

On Dr. Lansing's face a half frown rested, forgotten. His trained eyes automatically took in the details of structure of the plants, the occasional insects, tabulating what they saw.

In his mind's eye he was seeing the theoretical picture of a giant molecule with its chains and rings and branches of connected carbon atoms that depicted a living chromosome. He was seeing the normal chemical actions that took place in that theoretical chromosome and its companions. Normal chemical action that eventually produced a living organism. Tree or animal or human.

And then in his mind's eye he was seeing a different kind of action. In the heart of this giant theoretical molecule, where no external atom or ion could reach, a carbon fourteen atom suddenly became something that wasn't carbon. Subtle shiftings of ionic potentials began, and when they were completed the chromosome was something else.

By analogy he saw the structure of chromosomes in the seed bearing the same relation to the adult organisnm that a set of basic postulates does to a system of mathematics, or a set of traffic laws does to over-all behavior of traffic. One insignificant change spreading its effects throughout the resultant system, altering it perhaps beyond recognition.

AND INSTEAD of that basic change being brought about in a sensible and intelligent manner, it was wrought by chance. Blind chance that placed an unstable carbon atom any place in the molecule. Blind chance that dictated when that atom would change, and what would result when it did.

That process had been the major mechanism of evolution from the first beginnings of life. Its workings had given the first and most primitive of virus forms a protective wall that had made it into a single-celled life form. That process had given the cell wall properties of cohesion that made possible the multi-celled organism. That process, working through the one unstable carbon atom in a thousand billion, had enabled blind chance to explore every avenue of possibility in organic chemical structure over an interval of ten thousand centuries until it discovered Man!

But here Lansing noted the differences that made each tree, each leaf, each blade of grass, unique. Here was no one C-14 in a thousand billion atoms of carbon. Instead, by actual test, there

was one in every seven thousand. An average of three in the structure of every molecule that possessed the attribute of Life!

Lansing looked around. Here, in the grasses underfoot, the trees, the insects, and in the female form that flitted overhead from tree to tree, pausing to look down at him and Thorne and Grant, was the blind process of evolution carrying on its explorations at a mad pace a billion times faster than Nature intended; so swiftly that it had no time for stabilizing and perpetuating its discoveries!

In swift bold strokes it lifted the human form to that of angels, and plunged it down to the primeval slime. There was no way of knowing what Balu's parents were like, or what her offspring would be like, except that they would almost certainly not be like her.

Lansing's brooding frown etched its way deeper into his features. Here was the force of Life, taking inanimate atoms and shaping them together into the animate dynamism of living form. And here too was the force, infiltrating carbon fourteen, making of that Life force a plaything.

He sensed it around him, touching against the wall of his spacesuit with hungry fingers from the atmosphere, omnipresent and infinitely patient, ready to permeate and contaminate every cell of his body—if he would but take off his helmet and breathe: for, though the bloodstream primarily absorbs oxygen and gives off carbon dioxide, it also absorbs carbon dioxide and carbon monoxide, so that with each breath millions of carbon ions enter the blood. *And only one C-14 atom in the right place is needed to produce a mutation!*

Something jerked Lansing out of his reverie. He looked around, trying to find what it had been—and saw the supposedly paralyzed Grant's hand cautiously extracting Thorne's gun from its holster.

"LOOK OUT, Thorne!" He shouted, leaping forward.

He saw the gun come up and center on him. He tried to duck aside. Then he felt the tingling sensation of every member of his body going to sleep. As he sprawled forward he caught a fleeting glimpse of the gun being turned down toward Thorne's legs. He found himself staring straight up through the trees at the sky. Aside from the tingling feeling of arms and legs asleep, and even stomach and chest and shoulders, he wasn't uncomfortable.

But how long had he been that way? Searching his mind he was distinctly aware of a gap in time. How long it had been was impossible to tell.

"Damn you, Ted," he heard Thorne say. "My legs are paralyzed. Put down that gun. You're insane."

"Insane?" Grant mocked. "For the first time in my life I'm not insane." He laughed.

Thorne's voice sounded in a sharp, "Don't!"

A moment later Lansing saw Grant standing above him. He was no longer wearing his spacesuit.

"I just wanted you to see me," Grant said. " Now you'll know there's no use looking for me. By the time you found me I would be too contaminated to be allowed on the ship. Goodbye."

Lansing tried to talk, to tell him to put his suit back on, to explain to him he was sick. That the C-14 had in some way gone to his brain and he was doing things he didn't really want to do. But he was gone, and there were only the still trees and the jagged spots of blue sky.

And there was no sound except for the infrequent petulent wail from far away: "Bah-loo. . ."

Balu had said it was her brother. Why did he keep calling her? Why did she so calmly ignore his call? Why didn't he come looking for her, or *could* he look for her? From the deepness of his voice he was quite obviously adult. Was he one of those winged men who had scuttled the two helicopters? What had become of the wounded flying man?

These and dozens of other questions formed in Lansing's thoughts without any hope of immediate answer.

He returned again and again to the winged men. It was significant that the only humans he had seen so far all had wings. Was it possible that nature had found an answer to C-14 in some genetic pattern that remained stable, and that all human life here was now of the winged variety? That seemed impossible, but wings growing from shoulder-blades were impossible, too, and Balu had them . . .

The tingling feeling began to grow less. According to the books that meant paralysis would soon go away. The sensory system would recover before the motor network. There would be a period of perhaps five minutes during which feeling would be normal but muscular action still difficult. Lansing wished he could at least turn his head and see how Thorne was.

Something vibrated through his spacesuit. It was repeated. It came at regular-spaced intervals and seemed to be a shaking of the ground he lay on. It could be some gigantic creature walking. A distant crashing noise lent support to that theory. The sound died away. The shaking of the ground stopped.

Suddenly Lansing felt his eyes blink. It was painful until tears washed accumulated dust particles away. Involuntarily he moved his head, then froze in surprise and dismay.

Several winged men squatted around in attitudes of patient waiting.

Lansing stared at them. Then his eyes went to Thorne. Strands of the tough grass were wrapped around his wrists and ankles. He was still under paralysis, but when he recovered he would be unable to move.

Experimental tugs at his own legs and arms revealed that he was also tied.

"One of them moves," a winged man said.

LANSING thought swiftly. How much did they know? How dangerous were they? The thongs, the patient waiting until one of them showed signs of movement, pointed to their being friendly but cautious.

Acting on this assumption he looked directly at the speaker and smiled. "Yes, I'm awake now," he said casually.

"And so am I," he heard Thorne say, matching his tone.

"Fine," the winged man said. "We'll untie your legs so you can walk. Then we must take you to Oldred to see what is to be done."

"Who is Oldred?" Lansing asked as fingers started unraveling the grass strands around his ankles.

"You don't know?" the winged man asked. The others were watching with great interest. "He's our leader. He will want to know about men who shed their skin." He pointed.

Lansing and Thorne sat up and saw what he meant. Ted Grant's helmet and suit lay on the ground where they had been abandoned. Their eyes widened. They looked at each other in secret warning.

"Stand up," the winged man said. "Soon it will get dark."

Lansing noted with surprise as he stood up that the winged men were small. They were only five feet tall, which made them a good five inches smaller than Balu. They all had the close-cropped hair. Their features varied in detail, one face hinting at one race and another at another, but none of them had eyes as strange as Balu's. In fact, he decided, except for the muscular and efficient-looking wings, they were quite ordinary in appearance. One of them even had normal hands and feet.

"Come on," their spokesman ordered. He led the way.

Lansing recalled the aerial view of the country as he had seen it from the helicopter. Fifty miles in the direction they were now travelling was a range of hills. Before that, perhaps less than ten

miles away, was a small lake.

"Bah-loo. . ."

The wailing bawl broke in on Lansing's thoughts. He looked at the winged men. They seemed not to have heard it.

"What was that?" he asked.

"That," one of the winged men said, "was Oldred."

"Then your leader is Balu's brother?" Thorne said in relief.

The winged men all stopped and looked at him. "What do you know of Balu?" one of them asked in a menacing growl.

"We. . .chanced to meet her," Lansing said quickly. "She told us her name. Then she flew away."

The winged men said no more, but now the pace they set was much faster. The slope of the ground changed to gradual ups and downs and finally became all downhill. They crossed a clearing that gave a view of the lake. Two of the winged men took to the air and went on ahead.

Speaking in German Thorne said, "Should we try to escape?"

Lansing shook his head and answered in the same language. "No. We probably couldn't for long, and I want to see this leader they have. Also, we'll be missed before too long, and so long as they think our spacesuits are skin, they won't try to take them off us. When the search party comes within range of our suit radios we can tell them how to find us."

"What were you saying?" a winged man asked suspiciously.

"We were discussing your leader," Lansing said. "He must be a very great man."

"Then you've seen him before!"

"No," Lansing said. "I was merely judging by the appearance of you and your companions."

"Oh?" the winged man said vaguely. "Well, you're right. He is a great man. He grows greater all the time. Within the memory of man he has always been great. Some day the lake will be too small for him."

He waited until he saw the effect his statement had produced, then turned his eyes away.

"He must be kidding," Thorne said in German.

"I don't know," Lansing said thoughtfully. "It may be possible. Continued growth isn't half as fantastic a possibility as wings. The most tantastic thing about it is. . ."

"What?" Thorne said.

"If Balu is his sister—"

"That would make her far older than she looks!" Thorne said.

"That's true," Lansing said. "But what I was thinking was, that

would make it possible that she is the mother of all these winged men."

THEY STOOD close together on the sandy beach, their eyes searching the undisturbed surface of the lake. A quarter of a mile out was something small and white. It hadn't moved since they arrived.

The winged men seemed to be waiting.

Rapid movement overhead attracted their attention. It was several of the winged people. Two of them were carrying a third between them. One of his wings was half severed. It was the one who had tangled with the helicopter blade.

The group darted out over the lake toward the thing that stuck out of the water. As they neared it, it emerged further from the lake.

Lansing and Thorne stared in stark unbelief. It was the profile of a face. Bloated almost beyond recognition it was still a human face. And from the indeterminate chin to the sloping top of the forehead it was at least a hundred feet.

The group of flyers slowed to hovering flight above it. Screams drifted across the intervening water to those on shore. Abruptly the wounded flying man was dropped. Still screaming, he was trying desperately to fly with his one good wing.

The gigantic face elongated another ten feet. The flyer vanished within the maw of the enormous mouth. It closed, cutting off his screams. At the same time, the surface of the water was convulsed and a human chest acres in extent broke the surface.

Another group of winged people appeared over the lake. Four of them were teamed together over the body of a large animal. The mouth opened again to receive this additional morsel.

Dazed at the sight, Lansing looked around him—at the peaceful trees, at the white sandy beach, so normal in the framework of concepts he had built up about the Earth. He looked back at the monstrous form in the lake and squeezed his eyes tightly together, shaking his head. When he opened them again mild waves were washing up on the beach.

A winged man grinned at him. "We all get there eventually. I think you two will be next, though. Oldred will be curious about your taste."

"Now?" Thorne asked Lansing tensely, in German.

"No," Lansing said. "I think our guns can paralyze that thing's throat if we get dropped in. I want a chance to observe it and see if it still has intelligence. It must have taken centuries for it to grow that large. Maybe it knows what happened. I want to talk to it."

"Bah-loo. . ." The call was a deafening roar. But now there was an understandable reason why it had carried ten miles!

"You want to talk to *it?*" Thorne exclaimed.

A SWIFT figure darted into sight from over the treetops and landed lightly on the sand after seeming certain to be about to crash. It was a child, a girl. "The hairdred is coming!" she shrilled. "The hairdred. This way." She turned and leaped into the air, her wings taking deep bites for quick altitude.

"Hairdred!" It was a murmur of fear.

Lansing felt the ground under him quiver the way it had when he had first regained feeling after the paralysis. The winged men looked fearfully toward the trees. Two of them seized him between them and leaped into the air. Their wings beat frantically as they rose a few feet. With cries of disappointment they dropped him.

He landed sprawling on the hardpacked sand and had a fleeting glimpse of Thorne doing the same. Then everything was blotted from his mind by the sight that confronted him.

The creature was eight or nine feet tall. Its arms were long and its legs were very short and bowed. From its broad shoulders to its pink toes it was covered with a mat of hair.

But it was its face that drew Lansing's eyes with hypnotic horror. A face that was entirely human, on a large scale, and perfectly proportioned—lean cheeked, a firm cleft chin and beautiful nose. By itself and without regard to size it was definitely a pure British type. Except for the eyes. The pupils and irises were black. What should have been the whites were a mottled dullish brown. Large veins formed networks over their surface. In contrast to the face, which seemed molded in lines of gentleness, intelligence and humor, the gleaming jet centers of the eyes seemed to hold the ultimate spirit of hate and evil. They added the touch that made the face that of a fallen angel, a Sathanus, in keeping with the giant beast form of the body.

Thorne had seen it too. The initial moment of surprise was over for them and the hairdred. As it raised one of its legs to step forward, both tremendous arms reaching toward them they fumbled madly with their bound hands at the flaps over their hip guns.

Thorne secured his gun first. He pointed it at the nearest part of the giant anatomy, a leg. The hairdred toppled sideways, an expression of surprise on its face. One of its hands touched Lansing's legs. Fingers big as jointed forearms wrapped around, squeezing. Lansing screamed at the pain. His gun was out. He

pointed it at the arm and saw the huge fingers slacken.

The hairdred uttered the equivalent of a grunt of surprise. It came out as a deep unhuman bellow.

Both men were now playing their paralysis guns over the monster. Even when it lay completely still they continued, until their frenzied fear abated.

Trembling, they stared at the mountainous bulk.

"Horrible!" Lansing said shakily. "Horrible. Horrible. And yet, it's human. I can still feel sorry for it. Except for C-14 and the inroads it has made in these thousands of years, it would be like us. That face. That beautiful godlike face."

"All I hope is that they find us and get us off this planet," Thorne said. "And when they do, I hope they drop a sunmaker bomb and wipe out the whole ungodly mess."

"Oh, no," Lansing said quickly. "I think—" He stopped and looked up as a flurry of wings descended and the flying men were back.

"What did you do?" they asked, and there was caution and respect in their manner.

"WHAT IS it?" Lansing asked, evading the question. "That girl called it a hairdred. You've called that monstrous thing out in the lake Oldred."

"Oh," one of the winged men said, "all the giants are called dreds. None are like our Oldred."

"I can see that," Lansing said impatiently. "What I mean is, is there a race of giants? Are there more like this one?"

"Race?" The winged man looked puzzled. "What's that? There are more of them, of course. Lu is this one's brother." He pointed at one of the other winged men, who grinned and nodded vigorously.

"Your brother?" Lansing said. "But how can that be? You are so different."

"We are molded by our spirit, " Lu said seriously. "The flesh takes the form predetermined by the soul."

"Nonsense!" Lansing said sharply. "Your form is determined by the gene pattern in the egg. And it's unstable carbon, C-14, that has botched up the human strain."

"I don't know many of the words you use," Lu said, "but you are right, according to the teaching. *Cif-Fortean* is the Universal Spirit that molds the flesh to fit the spirit. But you and your companion have very strange spirits indeed. None are like you. Oldred will be interested when we can attract his attention."

"When will that be?" Thorne asked.

"Maybe not for days. Right now he's hungry. We hunters have been scouring the country for days, searching for enough food to satisfy his appetite."

"Why don't you let him die?" Lansing said. "He's too big. It would be an act of mercy to—"

"But we were created to serve him?" Lu said. "You just don't know what you say. You must be from a far place."

"And him?" Lansing said, pointing to the hairdred.

Lu shrugged. "If he lives, then many lifetimes from now he will crawl into the lake beside Oldred when his legs will no longer support him. Maybe he will kill Oldred. Then our children's children will feed him."

"Oldred once walked on land?" Lansing asked.

Lu nodded. "It's so. Far before the memory of anyone but Balu, our grandmother."

"What is the far place you are from?" one of the other winged men asked impatiently.

"Too far for you ever to have heard of it," Lansing said. "There are many of us, but we came here in flying machines. You know about that, of course. You made our flying machines fall to the ground."

LU WAS shaking his head knowingly. "We do know about it. You must be from the home of the *Cif-Fortean.* Within the memory of Oldred some of our ancestors found it after many days of flight. Only two lived to return. The others were—" He stopped his eyes widening, and turned to the hairdred. "Made helpless so they couldn't move!"

"What happened to them then?" Lansing said.

"They were taken behind a wall of solid water that surrounded a huge place and covered over the top of it. Though the two waited for many days they never came out."

"So Oldred has said," the original spokesman for the winged men said. "You are two of the guardians of the *Cif-Fortean* then? You must be." When Lansing hesitated, he dropped to his knees and bowed his head. "I am Paul," he said. "I wish to thank you for giving me the form of a winged man. I have tried to be worthy of it."

The others had dropped to their knees and were saying much the same thing. None of them noticed the change that had come over the hairdred. He had recovered and was lying still, waiting for his chance. Now, suddenly, his gigantic hands shot out. Both

Lansing and Thorne found themselves dangling head down with one leg imprisoned in a giant fist.

"And I wish to curse you before I kill you," the deep voice of the giant said, "for giving me the form of a beast so that I am an outcast."

"Stop!" Lansing said, fumbling for his hip gun. "Don't you know there is purpose in everything? We made you as you are because we had a purpose for doing so!"

The hairdred, about to dash them both to the ground, paused. As Lansing had hoped, he was curious, and so long as curiosity remained he would not destroy the ones who could satisfy that curiosity.

"Put us down!" Lansing ordered.

Slowly, relunctantly, the giant gorilla monster with the face of a man obeyed.

Lansing saw that this had increased the respect of the winged men. A plan, an idea, was born in his mind. He gave Thorne a warning look. Then, looking up into the face of the hairdred, he said with great solemnity, "From now on you belong to me and will serve me. And you, Lu and Paul, and your companions, will also serve me."

He paused, searching in his thoughts for something else to say that might help. It wasn't necessary. The winged men were again on their knees. And the hairdred, his brilliant coals of eyes flashing with a new fire, had also dropped to his knees. "*We* are yours," he boomed, a world of pride going into the *we*. Tears welled from his weirdly soft eyes. Tears that washed away some of the infinite loneliness of a lifetime of ostracism from the companions of his childhood.

IT WASN'T until later that Lansing and Thorne could talk. The sun had gone down. The moon cast an eerie glow through the trees that made things visible in an unreal way. Thorne has watched the winged men fly to high branches and relax in what seemed suicidal positions, and had recalled his first glimpse of Balu as she slept that morning.

Fred the hairdred was stretched out on his side not far away, callous of danger, his broad shoulders making his relaxed width as much as an average man's height.

Lansing seemed eager to discuss something. Thorne had questions he wanted to ask. Both men talked in German in low voices.

"How did you know the beast would let us down?" Thorne asked.

"Remember when you were under paralysis?" Lansing said. "You were able to hear everything clearly. I knew he had heard us talking and had digested a lot of what we said. Even so, it was just a gamble I was taking while I tried to get my gun out of its holster. And the others, I saw it would be utterly useless to try to teach them the truth about themselves now. Better to use their beliefs to our own advantage and use them to help us get to the root of what's happened here on our home planet."

"But we know what's happened," Thorne said. "The unstable carbon has caused it all."

"Yes. But unless some artificial source kept manufacturing it, it would drop to a minimum before long. Remember what they said about a domed city? My guess is that somewhere here on Earth a group still lives that knows science. I would say that they have atomic piles that are set up to make C-14 and disperse it in the atmosphere."

"But why?" Thorne said. "What would be their object?"

"There's no way of learning that until we find them. Some of the microfilm records of books I've read mention something about groups that believed the only way man could be peaceful was to practically wipe him out, and keep him that way. It could be that some sect of that type gained control of an atom plant during a war and carried their plan into successful operation, and their descendents have carried on the plan. If so, we've got to find that dome city and put a stop to it. In a few hundred years, or even less, the C-14 would drop to a safe level. The various breeds of man would slowly straighten out and breed true. History could start over again. Especially with us of the *Astral Traveler* to hide things and later establish colonies of our own kind here, with birth-control restrictions off so that we would multiply."

"What about people like our friend Fred?" Thorne said.

"It would all straighten itself out. I hope." Lansing smiled. "Fred, the poor devil. Things like that hundred-foot-long monster in the lake couldn't last. I wonder if he'll live forever if fed? I've been trying to figure out his age from his size. He must be over a thousand years old. Maybe about fifteen hundred."

"And his sister," Thorne said. "How could she live as long if she doesn't keep growing?"

"Some other glandular balance. We won't bother about those things. Time enough for study after we find and root out the fiendish thing that's causing this tragedy to humanity. Now, let's

get some sleep. Tomorrow is going to be a busy day."

"I wonder how Ted is making out," Thorne said after a long silence."

Lansing sighed. "There used to be micro-organisms that made their way into the body and multiplied rapidly under the ideal environment they found there. One of mankind's greatest battles was against that type of enemy. I venture to say Ted's corpuscles are very busy. It'll be interesting to dissect his body when we find it. Still, maybe he will survive. I've been puzzling about what came over him to behave the way he did."

"I know what came over him," Thorne said dully. "Something that's lain dormant for three thousand years while we traveled through space. Something stronger than—anything."

After a long time Thorne went to sleep, with Balu's eyes vivid in his mind. Eyes that held the secret of life and promised to reveal it to those who had courage.

Lansing remained awake a few moments longer, covertly watching Thorne and understanding far better than Thorne could have guessed. Just as he was dozing off, a thunderous bellow from the lake shattered the night.

"Bah-loo. . ."

Oldred, too, was lonely.

BOTH THORNE and Lansing slept fitfully. The night seemed full of sounds, and it was the first night outside the confines of a ship for each of them. There was the sound of the trees swaying in the breeze, the small sounds of night creatures. Once one of the winged men fell off his branch and uttered an involuntary cry of alarm as his insticts made his wings catch hold and keep him off the ground. And Fred the hairdred snored, though it was more like the soft sound of regularly spaced blowoffs from an air tank with a safety valve.

Once, just before dawn, a faint whisper came over the suit radio. "Dr. Lansing," it said. But it was very faint and wasn't repeated.

At dawn Oldred once again took up his petulant calling for Balu. With the first stentorian bellow the winged men awakened. Lansing marveled at the delicate balance they maintained while they stretched their wings.

Fred opened his large round eyes without otherwise moving a muscle. The iridescent black pupils contracted to small dots in the center of soft brown hemispheres as he regarded Lansing thoughtfully.

Lansing returned the stare, waiting. He found it hard to believe that these strange mutations on the human race could be

held by superstitious awe. Surely, he thought, a night's sleep will have made clear to them that their variation from the norm is due to the quite understandable action of an element with known properties, and that no supernatural agency was involved.

But one by one the winged men dropped to the ground and bent low in an attitude of reverence, first to him and then to Thorne. When the hairdred finally heaved himself to his feet with a grunt and did reverence as humbly as had the others, Lansing breathed a sigh of relief. It still seemed too improbable to accept, but there it was.

It was Lu who asked the inevitable question. "Should we bring you food, Dr. Lansing?"

The vision of actually eating ounces of radio-active carbon in food made him shudder. He shook his head, and saw the awe in Lu's eyes increase. He turned and looked at Thorne with a half smile. When no one was looking both men surreptitiously pressed the stud on their belts that popped food tablets into their mouths, and a second stud that raised a tube to their mouths so they could draw in water. The suits were designed to be lived in for periods at a time. It would be another ten days at least before the problem of exhaustion of food, air and water would have to be met.

"No," he said. "As soon as you and your companions have eaten, I want you to find out if Oldred will talk to us. I want to ask him some questions."

IT WAS AN hour later that he and Thorne, watching from the shore, saw Lu pause above the monster and make motions that brought the head further out of the water. Water cascaded from an ear for a full minute in a foot-thick stream. Then Lu dove down on spread wings to land on the ear. Fifteen minutes went by. Then a bellowed "Yes," came from the giant lips. Like a slowed-down tape recorder Oldred said. "Bring them out where I can see them. I'll answer questions."

Ready-made ropes of grass fiber were brought to make harnesses for Lansing and Thorne. They were each carried by four of the winged men to spots four or five hundred feet directly over the mountainous face.

They steeled their stomachs against the awful sight. The toothless mouth was a yawning cavern in a mountain of flesh that bore a strong resemblance to a human face overlaid with layers of fat. The whitish tongue alone weighed tons.

"Your questions," Oldred said, and the breath of his speech made the carriers waver in their hovering flight.

"How old are you?" Lansing asked.

Winged men farther down relayed the question to Lu who shouted it into Oldred's ear.

Miraculously, a smile quirked across the mountainous face. "Lord, I don't know," came the answer. "A thousand or two thousand years, I guess."

"Do you remember when humanity began to change?"

"In my memory it has always changed, but in my youth while I still walked the land I was told tales of a new spirit that had taken charge of the world many centuries before, molding man's flesh to fit his spirit. I was told that I had a very great spirit, and it must be so."

"When you still walked the land were ther others that appeared like us?"

"I have seen them. But none for many centuries."

"When you still walked on the land, was Balu in existence?"

"She is my sister," Oldred said. "My twin sister. She is like our mother, with her wings, and somewhat like our father with her eyes. When our mother died I was already almost too big to walk on the land, and our mother made her swear she would protect me until I died. That is why she cannot die until I do. And something within me says I will never die so long as *Cif-Fortean* rules the world."

"Where is *Cif-Fortean?*" Lansing asked, aping Oldred's pronunciation of the term.

"It is everywhere, within us and within all living things. It is a spirit in the air itself. But its throne is within the dome of solid water far to the north of here, protected by—But why do you ask? Aren't you of the Guardians?"

Lansing started to say no. He realized abruptly that that would be the worst thing he could do. Oldred believed he would die if the pile that produced C-14 were destroyed.

"Yes," he lied. "But we were lost, and must find our way back. We must be taken to the dome of solid water."

"It shall be done." Oldred spoke with an air of finality, and promptly dropped back into the water, nearly engulfing Lu.

Lansing's and Thorne's ears were still reverberating from the deafening roar of Oldred's voice when they were set down on the shore again.

THE FLYING men left Lansing and Thorne on the beach with Fred the hairdred. Only one of them returned. Lu.

"I've been chosen to accompany you to the north," he said.

"Only you?" Lansing said.

"Only one of us can be spared. There aren't enough of us to keep Oldred in food."

Lansing stared at Lu. The man wasn't telling the truth. And he seemed most unhappy about going.

"Where are the others?" he said. "We ought to talk this over."

Lu shook his head. "It has been decided." he said with finality.

"I'll be enough to protect you," Fred said. "Lu can be our guide, flying above the trees to see what's ahead."

"All right," Lansing said.

Thorne spoke in German. "I think they believe whoever goes with us won't come back."

"That must be it," Lansing said in German. Then in English, "We want to see our flying machines that you wrecked. Then we'll start north."

They started the way they had come the day before. Fred led the way, his enormous shoulders swaying with his walk, seeming entirely animal from in back with his matted head of hair blending with his body fur. Lu spent most of his time in the air, dropping down for a chat occasionally.

It was afternoon before they reached the two helicopters. One had burned, leaving only a charred skeleton of metal. The other had crashed a mile away. Although it hadn't caught fire, it was strewn over a wide area. Neither could possible be repaired. The radios of both would never work again.

"We'll just have to keep going until a searching party happens to pass close enough for our suit radio to reach them," Lansing said.

For the rest of the day they traveled. The tough grass polished the boots of their spacesuits. It also made walking an effort. Fred had a trick of letting his feet bend back so they weren't snagged by the grass, a trick the normal foot couldn't imitate.

Night came. Lu stretched out on a limb. Fred lay on his side, his broad back against a tree trunk. Both were asleep almost instantly.

AND THEN suddenly, it was morning. Aching muscles slowly warmed up, but the grass seemed a little thicker underfoot and a little tougher. New varieties of trees took the place of the silver-leafed ones.

In the afternoon a river presented a problem. Lu was away for half an hour searching for a place they could cross, and when he

found one it took most of the remainder of the day to reach it and cross.

Just before dark Fred stopped suddenly and motioned them to be silent. His black eyes were alight with excitement. Noiselessly he stole ahead until he was out of sight.

A few minutes later a loud frightened bellow exploded in the silence. It was followed by thrashing sounds. Frantic bawling noises sounded. Then for a while there was nothing but silence.

The hairdred returned dragging the body of a huge non-human creature behind him. "Food," he said.

For the next few minutes he was busy tearing off the skin. When that was done he tore out huge chunks of meat and offered them to Lansing and Thorne. When they shook their heads, unable to hide the disgust on their faces, he grinned broadly and sat on his haunches while he gulped down large chunks of the steaming raw meat.

Lu had returned unnoticed. He perched on a limb and watched Fred, and when the hairdred had finished eating all he could hold and had stretched out to sleep, he dropped down and ate his fill.

During the night other animals came. Each time Fred awakened and snarled. And each time the animals slunk away, their gleaming eyes glaring hate.

In the morning Lu was gone

"HE'S PROBABLY just scouting around," Lansing said cheerfully.

"No," Fred said, his huge features mirroring the tragedy of a twice-broken heart. "I can see now he intended to leave us from the start. He was to lead us far enough away so that we couldn't find our way back, and then leave us."

"But why?" Lansing said.

The hairdred shrugged without answering.

"We'd better go back," Thorne said. "We have no idea where to go from here. No use going on."

"Maybe you're right," Lansing said. "A search party from the ship will find us easier near the wreck of our helicopters anyway.

But an hour later they realized how impossible was their plan to return. They were lost. Too late they saw how completely dependent on Lu's guidance they had been. They couldn't even find the river they had crossed.

Fred, in spite of his beast shape, was peculiarly lacking in a sense of direction. Or perhaps he was deliberately playing dumb because he didn't want to go back. Lansing thought of that, but

didn't want to antagonize the brute by saying so.

When night came again they might have been miles or merely a hundred yards from their starting point of the morning.

Clouds had been gathering during the afternoon. When the sun went down it began to rain. For a while Thorne threw off his depressed mood as he and Lansing marveled at the peculiar phenomenon.

Fred sat on his haunches and listened as they theorized on how the raindrops were formed. He seemed to be trying to follow their lines of thought. When they held out a hand to watch the drops spatter on it he did the same, his enormous face lined with concentration.

The talking grew sporadic, finally ceasing altogether. Lansing realized suddenly that he, and Thorne and Fred, were each lonely. For himself, he was lonesome for the comforts and the ordered surroundings of the spaceship. The rain thumping against his suit and the plastiglass of his helmet had a mechanical rhythm that reminded him too vividly of the rhythms in the ship.

Thorne—it was impossible to guess what he was lonely for. There was something about this Earth that had a strange effect on the emotions. He had felt it several times.

The sound of the rain, for example, as it fell on the leaves of the trees and his suit. It made a distinct and strange impression on him. He recalled now that moonlight had had a strange effect on him too.

He had read in some book about something related to that. It came to him after a moment. An ancient pseudoscience called Astrology. It had been just a brief article. Its basic tenet had been that the stars and the planets and the moon had emotional effects on the human mind that could be charted. It was analogous to the known effects of endocrine cycles on the emotional makeup. The article had suggested that any basis Astrology might have in fact was probably directly attributable to the endocrine rhythms.

But now that he was actually here on the Earth, Lansing wasn't so sure. "There are subtle forces here that work on the mind," he decided sleepily.

He opened his eyes to a scene of glistening splendor. Things around him seemed brighter and cleaner. There was a new feeling in his body. It came to him with surprise what it was. He had become accustomed to the long hard work of walking all day. For the first time since he had set foot on the Earth he felt thoroughly rested and fresh.

He got to his feet and looked down at Thorne, still asleep a few

feet away. Suddenly his eyes contracted. The hip holster at Thorne's side was empty. Its gun was gone. He reached to make sure his own was still in place. His hand encountered an empty holster.

There was a deep animal grunt behind him. He whirled. The hairdred, Fred, had awakened and was getting to his feet.

"My gun," Lansing said harshly. "Did you take it while I was asleep?"

"Gun?" Fred said. "What's that? No, I didn't take anything. Is something gone?"

Lansing studied him with narrow eyes. Either the human monster was a superb actor, or something else had stolen in and taken the two guns. Had it been Lu? Or had something else taken them?

He searched through the trees with his eyes. There was no sign of movement.

"WHAT'S THE matter?" Thorne asked sleepily.

Lansing spoke in German. "Something stole our guns while we were asleep. I don't think it was our companion. It may have been the one who was with us. Or it may be something new. But we must be careful that our companion doesn't learn we are helpless without them."

Thorne nodded. "Right," he said. "But I disagree with you about our companion. I think he did it. He's shrewd behind that air of dumb innocence."

The gleaming black eyes were looking at them with a patient puzzling light as though trying to decipher the strange words. They lit up at a sudden thought. "I wonder," Fred said. "Maybe Lu left us yesterday because we were near where he was taking you. Maybe he thought you could go the rest of the way without him."

Lansing shook his head. "I doubt if we've gone fifty miles from the lake. It may be only twenty miles. If it were near here we could have seen it when we were up in our flying machines."

"I saw those," Fred said.

Lansing turned to Thorne. "There's something in back of all this," he said in German. "I'm beginning to think we've been lied to and deceived all along. In fact, I'm sure of it. Maybe there isn't even any domed city. That might have been an invention to get us started on this journey to get rid of us."

"Why would they do that?" Thorne asked.

"Remember our status before we used our guns on this

companion we have here?"

"We were prisoners."

"And suddenly we were revered personages, the most irresistible form of flattery. And suddenly again we were completely deserted and lost."

"In retrospect it does sound that way," Thorne said. "Do you realize that in a few more days, unless we're found, we'll have to abandon our spacesuits?"

"That doesn't concern me as much as the reasons why we've been treated as we have. How would they know we couldn't find our way back? For that matter, is it conceivable that our companion, born and brought up not far from here, would become lost? There's only one really sensible thing that could account for what's happened. If they wanted to talk with the monster in the lake without our overhearing they would have to make sure we were twenty or thirty miles away, out of hearing!"

"You are quite correct."

THE NEW voice, speaking German, sounded over their suit radios. At the same time the hairdred's head turned, his huge black eyes looking through the trees.

Lansing and Thorne followed the direction of his gaze. They saw a slight movement. It resolved itself into a figure approaching on the ground. A figure in a spacesuit.

Or was it a robot?

It had two legs and two arms, incredibly long in proportion to body length, and encased in glistening cream-colored plastic. It had a spherical headgear that reflected light in flashes from its outer surface like plastiglass. But it wasn't transparent. Its inner surface was silvered.

"One-way glass," Lansing said, disappointed.

There was a soft laugh. "Sorry," the visitor said in German. "It's standard equipment."

He was taller than either Lansing or Thorne. His legs were four feet long, his body two feet long, with his head adding another foot to his height. Strapped to his back was a helicopter lift.

Two guns nestled in holsters at his hips. They were smaller than those Lansing and Thorne had had, but of a similar design.

"Now then," he said in German, his voice abruptly impersonal, "answer a few questions. And tell the truth. We thought we knew of every dome in the whole world. Evidently we don't. Where are you from?"

"We're from a spaceship," Lansing said. "The *Astral Traveler.*

My name is Dr. Lansing. This is Andrew Thorne."

"There was such a ship," the stranger mused, "built three thousand years ago, that left the Earth. It was never heard from again. Don't tell me. . . . You do have the ancient norm in shape. It's just possible."

"This *is* something. By the way, my name's John Baker. We'd better get you to the dome so you can get out of your suits and have a good bath."

OTHER SHAPES identical with John Baker were approaching through the trees now. Baker's body turned toward the hair-dred Fred.

"You will go back to your reservation at once," Baker's voice ordered in English.

The giant's eyes turned to Lansing, glistening with unshed tears. His firm British lips, reincarnated into flesh from an era thirty centuries in the Earth's past by the eternal shuffle of the deck of Life, opened twice without uttering a sound. Then, "Goodbye, Dr. Lansing." It was choked and muffled. He turned away and started through the trees, his massive frame swaying from side to side as he walked on his squat legs. Dr. Lansing's eyes were moist as he whispered, "Goodbye, Fred."

"IT'S only a short distance from here to the tube entrance," Baker said.

Surrounded by the long-legged men, Lansing and Thorne were led through the trees. They had gone little more than a mile when they came to a stop. A few seconds later a rectangular section of the ground lifted straight up.

An elevator emerged slowly from the ground. They all stepped on the platform. The elevator sank slowly. When the earth roof had closed, it was dark for a while. There was a sensation of dropping as the elevator speeded down.

Abruptly it was slowing to a stop and light was everywhere, revealing a concrete tunnel and something Lansing and Thorne had seen in pictures, a long car that ran on parallel steel rails.

Baker reached up and gave his mirrored headgear a half turn and lifted it off. His grinning face was thin but entirely human.

"You can get out of your suit now," he said. "We're free of contamination down here."

"No Carbon-14?" Lansing asked.

"Even less than the normal atmosphere of thirty centuries ago," Baker said. "Every atom of carbon within the aquarium, as we call it, was derived from petroleum that had been in the ground

for millions of years. We lean over backwards here inside."

The others were taking off their silvered domes and plastic suits. And all of them were so much alike in shape and features that they might have been identical n-tuplets.

"Go ahead," Baker said.

Thorne took off his helmet and breathed deeply. "Wonderful!" he said.

Hesitantly, Lansing did the same.

The car started and was quickly travelling at top speed, the walls of the tunnel blurred as they shot past. At regular intervals the tunnel widened to a momentary glimpse of a loading platform.

"Other exits," Baker explained. "We have subways radiating out in all directions from the dome. The dome itself is something we're quite proud of. It was built by laying it over the surface of a large hill a little at a time, transplanting the vegetation to the outer surface as it was laid. Vertical shafts were bored and filled with reinforcing rods and then concrete. When the whole dome was completed the hill was mined out from underneath. Not even daily survey flights of enemy planes could have detected its construction. That was done perhaps less than a century after your ancestors on the *Astral Traveler* left, but we're still proud of it."

"That's something we want to find out about," Lansing said. "The picture I have so far is not one I can sympathize with. As I understand it, there is an atom pile in operation that keeps the air, and consequently all life outside the dome, contaminated with radio-active carbon. That could only be so if it were done deliberately."

"You're tired, Dr. Lansing," Baker said.

"And upset," Lansing said. "But still want to know if that's right."

"Let's put it this way for now," Baker smiled. "Not so much deliberately as from necessity. You're a scientist. Suppose we let it drop at that until you have had time to rest and get all the facts. Your strain of humanity has been away from the Earth for three thousand years and is completely out of touch with us and our problems. Don't you think it unfair to form snap judgements based on values that are now, at best, unknown?"

"All right," Lansing grumbled. "I agree I'll be in a better mood to observe after a good rest and some decent food. Pill energy isn't satisfying. But I'm warning you ahead of time that neither I nor any of us from the *Astral Traveler* will show any sympathy

toward a plan of deliberate contamination of everything outside a protected dome."

"THIS IS more like home, isn't it?" Lansing said to Thorne after Baker had left them. But before Thorne could answer, a knock at the door jerked both men around.

"Come in," Lansing said.

They watched as the knob twisted and door opened slowly. Thorne saw who it was first and gasped.

It was Balu, clad in a protective suit with thin transparent plastic over her wings.

"Hello," she said hesitantly, smiling. "I wanted to meet you, and tell you that I brought your companion back to you. I didn't understand. I'm sorry."

"You brought Grant back?" Lansing said. "Where is he?"

"In the dome hospital. He's being decontaminated. You see, I thought he must be from another dome. An enemy one. I had no way of knowing anything else, did I? Everything pointed to it. The pile-powered airship hovering in the air. . . ."

"You—you're wearing a suit," Thorne said.

"Of course," Balu said. "When I'm in the dome I must wear it to keep from contaminating the dome atmosphere. Would you like to see Ted? He's quite ill." She smiled ruefully. "I guess we have a few bugs his system isn't equipped to handle."

"Lead the way," Lansing said.

"He looks terrible," Balu explained as they walked down the corridor. "He picked up some ancient disease called spotted fever that the human race has been immune to for ages. But he'll be rid of it in a matter of hours, and they're decontaminating him. Flushing him out thoroughly. Very little C-14 will have lodged in him, and the doctors say it won't affect his offspring. But the dose he had was enough to make him crazy enough to lose himself like this. But he'll be all right now.

"Afterward," she said, "I'm to take you to the banquet they are making ready for you."

IT WAS a large room, perhaps thirty by fifty feet, with a fifteen-foot ceiling and paneled walls that several artists had spent their lives decorating. A large horseshoe table went around the room. A smaller table was at its apex. Every seat was filled except those at the head of the smaller table, where three empty chairs stood.

Balu led the way there and sat on the backless stool between two handcarved seats that had obviously been reserved for Lansing and Thorne.

They sat down. Their eyes roamed the hall while their minds tried to accept what they saw. It defied acceptance. There were two hundred people. They were quite obviously cultured, civilized, and intelligent. They were dressed in attire that had an approach to unformity of style.

Balu stood up and raised a hand for silence.

"Ladies and gentlemen of the Council," she said. "I wish to introduce Dr. Lansing and Andrew Thorne, of the spaceship *Astral Traveler* which has just returned to the planet of its birth after a journey of three thousand years."

Lansing looked at the long line of faces. In the whole room there was no distinguishing feature that could be called animal, other than Balu's taloned paws of hands. But the wildest flight of fancy could not have conceived of the variety of shapes represented there.

"Dr. Lansing and Mr. Thorne," Balu went on, "are representative of their race, our parent race, just as each of you is a male or female of each one of our stabilized forms." She flashed a warning smile to Lansing. "Right now, our guests are hungry. I'd suggest we all eat. Afterward we can get acquainted with the star travelers."

Neither Lansing nor Thorne noticed the food he ate, except to note that the potatoes had a better flavor than those grown in the tanks on the *Astral Traveler*. The other vegetables were also of good flavor, but strange. The meat was laboratory beef very much like that he had eaten all his life.

WHEN THE plates had been taken away, a man sitting across the table from them who had seemed quite short stood up. His legs were pipestems five feet long. His features were crowded in under a bulbous forehead from under which gazed quite normal blue eyes. When he spoke his voice was a baritone, clipped and efficient.

"I have been made acquainted with your reactions to us here on Earth so far," he said. "As President of the Council, I have been delegated to give you a quick picture of what's happened since your branch of the race left the planet."

"Briefly, there were several global wars. Atomic weapons were a terrible thing. The human race was not ready for them and perhaps would never be ready for them. About two centuries after your ship left, the final bid for world supremacy was made

by one of the race-conscious nations. It chose the best of its population and built protected domes for them to live in. It then put into operation a plan no other power group had dared try. Universal contamination. It chose radioactive carbon as being the easiest contaminant to produce in great quantities, and the one that, in the form of carbon dioxide, would spread all over the world. Experiment had already shown that a rather small concentration of it would be disastrous. Experiments on small animals had shown that almost invariably in two or three generations the offspring were so deformed they were born dead or were unable to succesfully grow to adulthood.

"Further, C-14 would die out more rapidly than any other of the workable radioactives, so that when the clean-up campaign was over the world could be restored to habitability and repopulated with this one race of people.

"For over twenty years they built up their supply of radioactive carbon, while they were constructing their domed cities along the same lines as this one we live in. Then, without fanfare, they released it. Of course it was immediately detected. That was to be expected. It wasn't in lethal quantities. It was presumed it would be quickly absorbed by the world's forests. There was no alarm. In fact, no one knew exactly what country had released it.

"It was considered impossible for enough to be produced to do any real damage. Too late it was found out that this was a false conclusion. Too late other countries built domed sanctuaries. An then what this country had expected happeded. In the battle to live in those sanctuaries against C-14, they became citadels under constant attack, changing hands often, with their inhabitants massacred. That happened to some extent even in the country that masterminded the scheme, but the planners had hidden the nucleus of their planned humanity well, and it remained for the most part undiscovered and safe.

"In five hundred years the human race was reduced to total savagery, and its numbers reduced to the point where whole bands of savages could live out their lives without meeting another group. Mortality was high, and continually growing. It is estimated that only one out of five thousand born alive was capable of living for more than a few minutes.

"But Nature had an answer ready-made for this attack. By the very nature of things, the evolution produced by C-14 explored every possibility and every path of possibility, upward and downward on the ladder of change.

"Genius persisted too. Here and there a mastermind perceived

the Whole. Wrecked dome cities were repaired. Petroleum was the source of stable Carbon. And in this environment of stable Carbon new varieties that had come into existence were developed into permanent human strains. You see many of them here. There are others in the interconnected domed cities of the American continents.

"With the growth of our new order of humanity grew a realization of the errors of the past. With it also grew a perception of the destiny that the last of the aggressors had embarked the race upon: the searching out of all the races potential to mankind.

"We could not turn back the pages of time. We could either arrest the progression of evolution by permitting the C-14 to die out naturally after we sought out and destroyed the criminal race, or we could carry on until it became certain no new mutation could be produced.

"By vote we chose to continue the experiment. Under our charter of world government at the turn of every century, we vote again. So far that vote has been for continuation. Do you have any questions?"

"DID YOU ever find the hidden cities of those who started all this?" Lansing asked.

"A thousand years ago the last was found and all its inhabitants destroyed."

"Then there are no more like us on the Earth?"

"No. The parent strain was unstable to begin with and didn't survive. I am of the opinion, though, that the world will welcome you of the *Astral Traveler* back into the family of races and make a place for you as you are. Am I right?"

There was thunderous applause.

Lansing stood up slowly, his face expressionless. "You must realize," he said, "that I am not actually a spokesman for all of us. In fact, Mr. Thorne here, and I and our companion now in your hospital, are merely scouts sent down to find out what's happened on the Earth. Therefore, I think the proper course would be for us to return to the ship we landed in and inform our superiors of what we have found. They in turn can make what decisions they think best."

The spokesman stood up again, smiling. "I agree with you," he said. "But we would like to know what you think personally. We realize of course that it must be a shock to you. Human values have changed. It was inevitable."

"Yes," Lansing said. "They've changed. But. . ." He paused and

looked over his audience. Suddenly he smiled. "I'm sure you won't have anything to worry about."

There was more applause. A buzz of conversation rose in the room. Lansing caught snatches of it and found none of it to be in English. He had wondered about English being used after so long a time. Now he guessed that it was probably a dead language preserved or revived because of all the scientific knowledge of three thousand years ago was in that language.

The spokesman stood up again. "Just as you cannot speak with authority for all your people, so I cannot at this time. But just as you hold out hopes of friendly reunion, so I feel strongly that I can promise full incorporation of the inhabitants of the *Astral Traveler* into the society of Earth's humanity with full citizenship."

IT WAS three days later. The ship had been contacted by radio and was waiting. Grant, though still weak, was well enough to travel. His spacesuit had been found and brought to the dome city. And now an atom-powered helicopter from the city's own fleet, loaded with dozens of reels of film and other carefully chosen samples of Earth civilization, was ready.

Lansing shook hands with one after another of the varied humans, a smile carefully fixed on his lips, his eyes unexpressive. And each was warm in his invitation for him personally to return.

At the end of the line was Balu. Lansing took her thick paw clumsily.

"I wish to talk with you a moment before you leave," she said.

"All right."

They moved away from the others.

"You are a little like me," Balu said abruptly. "It may be because you have lived a long time yourself."

"I'm sure you overrate me," Lansing said, smiling.

"No. I don't think so." Her violet eyes were serious. So close to her, seeing her eternally youthful face, he found it difficult to believe her centuries old. "I don't think so," she said. "You have no doubt noticed that they carefully avoided mention of the fact that I am one race of man that hasn't succeeded in breeding true. The immortal who doesn't achieve immortality by continued growth. Maybe it's because there has never been a male of my species. But it does make me an alien among them. Just as you are."

"Nonsense," Lansing said cheerfully. "I've watched them. In a way, you're their queen. In the city and outside. All of them."

"Their pet," Balu smiled. "Take me with, Dr. Lansing."

"Take you with me!" He blinked at her in surprise. "Why, my dear, I—I'll—"

"You won't be back," Balu whispered. "I know it. I see it in your eyes. Take me with you. I'll undergo surgery to remove my wings. I'll have these animal hands amputated and wear artificial ones. I'll wear dark glasses to hide my eyes."

"But I will be back," he insisted.

She shook her head. "You will tell them of Oldred and the hairdred. They will see things in those movies you are taking along. *I* know what will happen. Even if the others don't. And..." She rested a paw on his chest. "I have lived a long time. I have given myself to children to further their game of exploration of the paths of evolution of mankind. They are all children. Babies in a mixed-up cosmos where they try to convince themselves that everything is all right so they won't be afraid. But now I am tired. I want to rest. Take me with you. . . ."

She faced him straight. As he looked into her eyes and realized what she was trying to tell him, he felt like crying. "My dear," he said softly. "It would never work out. We belong to two different times. And it would be wrong to try to put them together. Believe me—it's better this way."

She stood motionless.

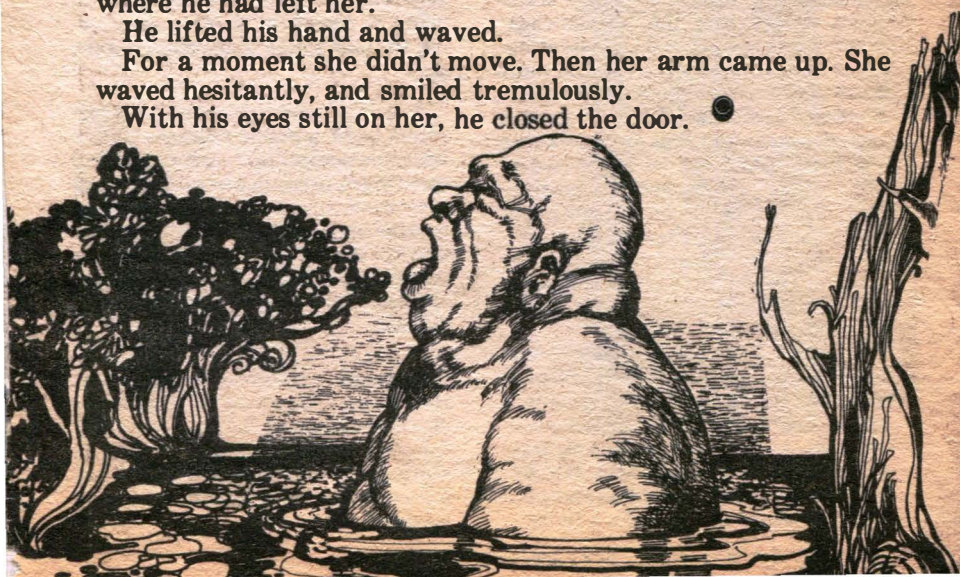
"Goodbye, Balu," he said gently. "Goodbye, my dear. And thank you."

When he stepped into the helicopter he turned and looked over the heads of the farewell committee. Balu was still standing where he had left her.

He lifted his hand and waved.

For a moment she didn't move. Then her arm came up. She waved hesitantly, and smiled tremulously.

With his eyes still on her, he closed the door.



ing note of the air pressure, temperature, and wind direction and speed from the various dials in the lab. The forecast had been for clear skies. He went to the window and saw the blackness replacing the stars.

Clouds? It couldn't be. But then it couldn't be anything else.

Except it was something else. The sky had been ripped open.

When daylight came the blue sky over the central states was marred by a thick and slowly expanding, greasy black line. By sunset the line had spread beyond New York and was edging toward Europe. It was also expanding westward, and having crossed the Rockies, was moving towards the coast.

It wasn't until the next day that the reaction began to set in. All across the continental United States people awoke to see half the sky gone. Blackness had replaced the blue, and when the sun crossed over the abrupt dividing line, the sun disappeared.

The reaction can be easily summed up:

Everybody wondered what the hell was going on.

NASA, after consulting its staff of astronomers, issued a public statement saying that the phenomenon, whatever it was, appeared to be atmospheric, and at any rate, would most likely be of short duration. NASA's meteorological staff had prepared a report concluding that the spreading blackness could not be attributed to any known atmospheric conditions and was probably an astronomical event. At any rate, the report predicted it would be of short duration. Fortunately the public relations staff stopped this report before it could add to the confusion.

By the time the second report was leaked to the press, the United States Weather Bureau had come up with a report expressing much the same conclusions. As time went on the near panic subsided to a queasy stillness. Nobody knew what the hell was going on but everybody had to make a living.

The president went on national television and said, in effect, that everybody was talking about the rip in the sky (although he didn't use that phrase); and that nobody could do anything about it (not that he made that statement very clearly). He called for the mobilization of a study group to begin a crash program. (The Joint Chiefs of Staff had advised sending a rocket aimed at the blackness, but retracted the suggestion when they were informed that NASA couldn't tell them where it was.)

The Soviet Union issued a statement claiming that the whole thing was a capitalist plot.

A couple of senators called for a congressional investigation, hinting that it was all a communist plot.

An environmental group stated it was the fault of hydro-carbons in the atmosphere. The spray can industry announced proof that the rip was caused by a lack of hydro-carbons in the atmosphere and an over-abundance of ozone.

Nobody believed anybody, but since the blackness had stopped spreading, the citizens began to relax. Things generally calmed down and got back to being as normal as possible, considering the continuing abnormality in the sky.

A team of scientists set up an observation team, a public relations staff to issue non-committal reassurances and spent eight to ten hours a day arguing over what else to do. Three weather baloons and a make-shift satelite were sent up. The net gain in knowledge was insignificant, but the PR staff pointed out that that fact alone was highly significant.

Farmers started worrying about their crops and a group of Jungian psychiatrists equated the rip with a dysfunction of the over-soul. Buddhists scoffed. The suicide rate increased, but a record number of pregnancies were reported.

All in all, things continued; only a little bit differently.

About two months after the rip appeared, the darkness in the center began to lessen. A golden glow seemed to be seeping through the blackness. The scientists on the panel, through their PR men, announced that the phenomenon was breaking up and that all would be back to normal in a matter of days, or, at most, weeks.

Two hours, forty-nine minutes and twenty-seven seconds later the face appeared. It was huge, filling most of the rip at its widest point. The face was described as "moon-like." It was extremely blank and open. Grossly moronic, in fact.

Some people thought it looked friendly, but even they tended to panic.

Naturally there was an almost universal religious revival. It stalled only because nobody knew what religion they should revive.

The face was visible for about a week. It blinked once. The world's reaction was mostly incoherent. Russia threatened war, but couldn't decide on a cause. The president went on television from the White House to reassure the public. He stated everything was under control. There was no cause for panic. Immediately after the speech he was flown to a secret underground emplacement under the Rocky Mountains.

The National Guard was called upon to preserve order, but because of the panic-clogged roads the individual guards couldn't get to their armories. Everyone was running around in circles and nobody was doing anything. Panic was about to be replaced by frenzy when:

The face spoke:

"OOOPS," it said. "Sorry. My mistake."

Quickly the rip was closed, as if the sky had been pushed back together and only a thin, greasy black mark remained. Little by little it faded. Finally it disappeared and everything went back to normal.

More or less.

ooops!

IT WAS, as nearly as anyone can figure, approximately 11 p.m. on the evening of August 13, 1979, when somewhere over Southern-Central Illinois, the sky began to rip open. The first two people to notice, and there is no way to know for sure who was *the* first, were an astronomy professor and a meteorology student on the campus of the University of Illinois. The professor was staring through a telescope at a faint and distant point of light assumed at that time, as all similar lights were supposed, to be a star. Suddenly the point of light seemed to recede rapidly, then disappeared, to be replaced by total blackness.

After rubbing his eyes, the professor returned to the telescope and saw nothing but blackness. Clouds, he thought, and went to a window. One by one he saw what he thought of as stars being replaced by a thickening black line spreading from west to east.

Clouds, he thought. But strange, dark clouds.

The meteorology student was mak-

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