if

WORLDS OF SCIENCE FICTION

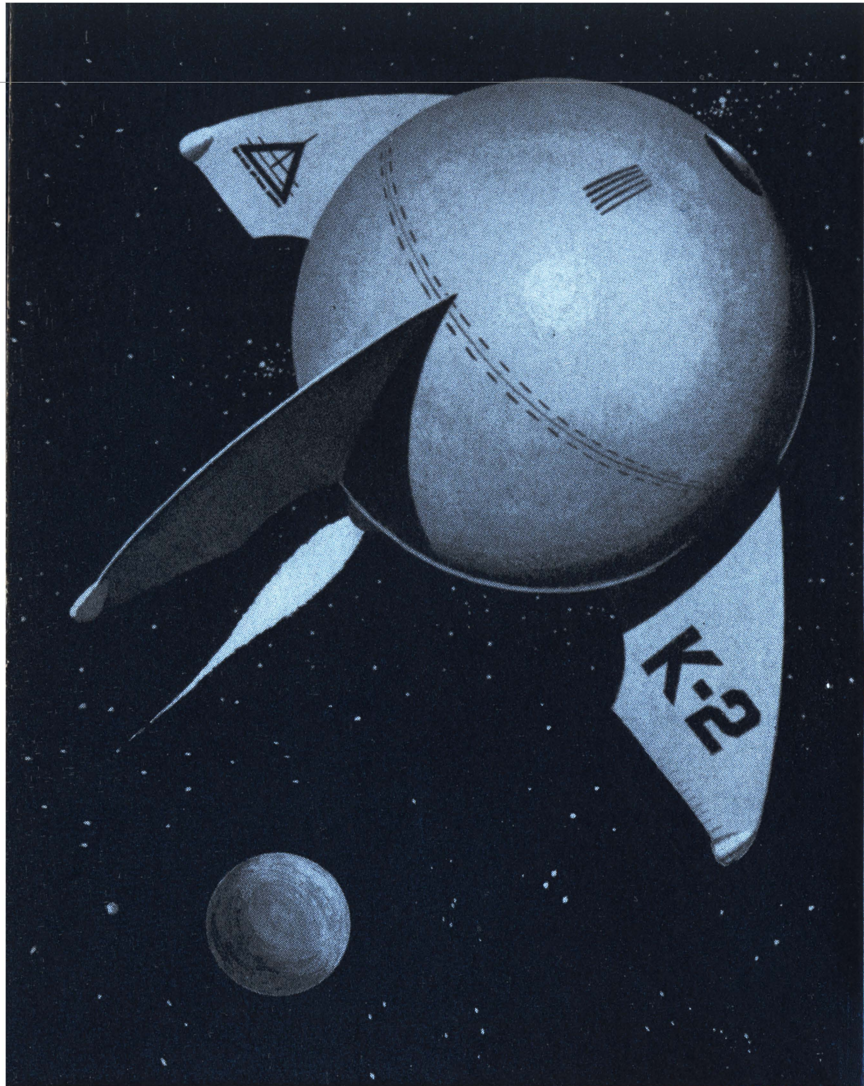
OCTOBER 1955   35 CENTS

K-2

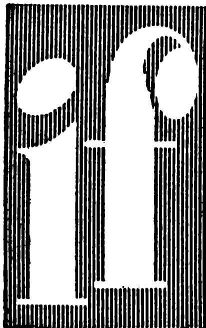
THE ALMOST MEN

by Irving E. Cox, Jr.

ARTHUR SELLINGS • ALAN E. NOURSE • ROBERT F. YOUNG



RETURNING TO SPACE STATION—One of the moon shuttle-ships (see front cover and May 1954 issue) is here shown leaving Moon for return to the space station, which is located outside gravitational pull of the Earth, for more freight. These cargo ships are built entirely on the space station and operate solely on this shuttle route. Navigating in a vacuum, the fins serve only as fuel tanks for control rockets and for landing gear mechanism. Some scientists contend that the sphere is the only practical design for a space ship—whether to the moon or anywhere else.



WORLDS of SCIENCE FICTION

OCTOBER 1955

All Stories New and Complete

Editor: JAMES L. QUINN

Assist. Editors: EVE WULFF, ROBERT W. GREENE

Art Editor: ED VALIGURSKY

NOVELETTE

THE ALMOST-MEN by Irving E. Cox, Jr. 2

SHORT STORIES

PRISONERS OF EARTH by Robert F. Young 38

THE PROXIES by Arthur Sellings 48

JUVENILE DELINQUENT by Edward W. Ludwig 64

SLOW BURN by Henry Still 72

LAST RITES by Charles Beaumont 88

MEETING OF THE BOARD by Alan E. Nourse 99

FEATURES

WORTH CITING 47

WHAT IS YOUR SCIENCE I.Q.? 112

SCIENCE BRIEFS 113

HUE AND CRY 117

COVER:

"Moon Cargo Ships" by Ed Valigursky

IF is published bi-monthly by Quinn Publishing Company, Inc. Volume 5, No. 6.

Copyright 1955 by Quinn Publishing Co., Inc.

Office of publication, 8 Lord Street, Buffalo, New York. Entered as Second Class Matter at Post Office, Buffalo, New York. Subscription $3.50 for 12 issues in U.S. and Possessions; Canada $4 for 12 issues; elsewhere $4.50. Allow four weeks for change of address. All stories appearing in this magazine are fiction; any similarity to actual persons is coincidental. Not responsible for unsolicited artwork or manuscripts. 35c a copy. Printed in U.S.A.

EDITORIAL AND BUSINESS OFFICES, KINGSTON, NEW YORK

Next issue on sale October 12th

All learning must begin with a need. And when the tried old ideas won't work for a people—won't conquer defeat and despair—a new way of thinking must be found . . .

THE ALMOST-MEN

BY IRVING E. COX, JR.

Illustrated by Paul Orban

HANDS SHOOK at his shoulder, dragging him awake. Lanny's foster father was bent over him, whispering urgently, "Get up, boy. We have to leave."

Groggily Lanny pushed himself into a sitting position. He had been sleeping in his earth burrow beside Gill, outside Juan's cottage. Hazily Lanny remembered being carried home from the canyon after the explosion, but he could recall nothing else.

It was an hour before dawn. Gill was dressing; his shoulder was wrapped in a homespun bandage. Lanny got up, staggering a little, and helped his brother put on his leather jacket and his weapon belt.

"Thanks, Lan," his brother said.

Lanny touched the bandage. "Shouldn't you heal the cells, Gill?"

"I have to expose it to the sun first. I didn't catch it soon enough last night, and too many germs infested the wound." To their foster father, Gill added, "I still think you should leave me here. I may not—"

"You're both my responsibility," Juan Pendillo answered. "We'll survive together, Gill, or die together."

"What happened?" Lanny asked

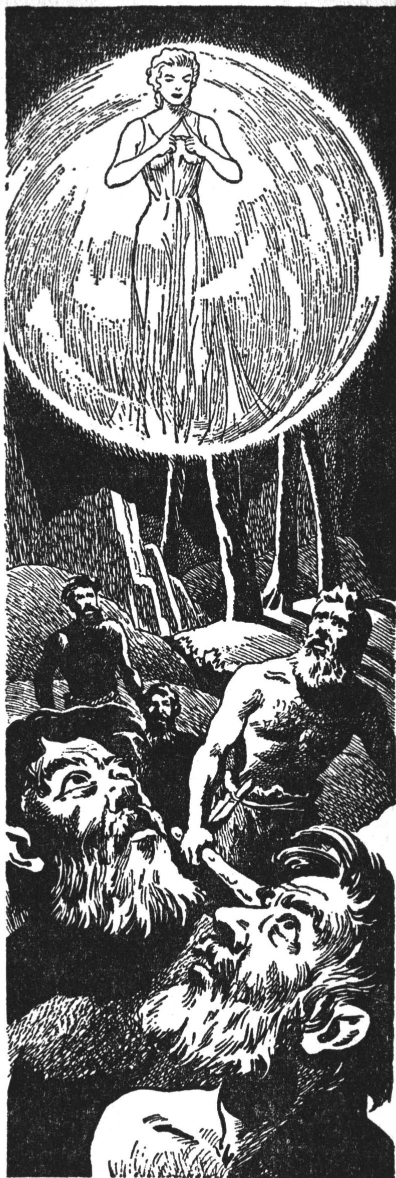
as he pulled on his breeches and pushed his stone knife and his wooden club through the loops of his weapon belt.

Silently Juan pointed toward the dawn sky. High above them Lanny heard the whine of a score of enemy police spheres. "They insist on the surrender of all eight hunters who went out last night."

Gill said, "But Tak Laleen killed Barlow with her energy gun. Why are they blaming us?"

"Barlow was working for them as a spy," Lanny put in. It was a convenient explanation, but vaguely he knew he was lying. He felt a pang of guilt, but he couldn't understand why. What had he done that he should be ashamed of?

What had happened last night? Lanny wracked his brain, trying to remember.



Eight hunters had been sent out to bring in a cache of rifles which Lanny's brother, Gill, had found in the rubble of Santa Barbara. It was risky business, because under the terms of the surrender treaty men were prohibited the use of all metals in the prison compounds. But the younger generation—boys like Lanny and Gill, born since the invasion—were more fiercely determined to resist the Almost-men than their elders. Armed with fifty rifles, they thought they would be strong enough to attack the Chapel of the Triangle.

The Almost-men: the children had coined the word, subtly asserting the pride of man. Yet they knew it was a semantic trick they played upon themselves. It changed noth-

ing. The conquerors were physically identical to men; their enormous superiority was entirely technological.

As the eight hunters crept toward the ruins of Santa Barbara, through a narrow canyon, old man Barlow suddenly emerged from the brush and stood grinning at them. It was his privilege to join the hunters; any citizen of the settlement could have done so. But the younger generation hated Barlow. He was the practical man; he called himself a realist. He never allowed them to forget they were defeated, imprisoned and without weapons; he took savage delight in poking holes in their plans for resistance.

"What are you doing here?" Lanny's brother demanded.

"I came to watch the fun, Gill."

"We're going to bring back fifty rifles; that's all—"

"Right under the noses of our masters? Don't be naive."

"There's only one way the Almost-men would find out—"

Barlow snorted. "Don't think I ran to the Chapel of the Triangle and told Tak Laleen what you were up to. They don't need that sort of help from us. When are you going to get it through that thick skull of yours? We're outclassed; we're second-raters; we'll never defeat them."

From the night sky they heard the low hum of a force-field car. An opalescent sphere soared above the canyon. Gill's fist smashed into Barlow's jaw.

"So you did tell her!"

Barlow fell back against the canyon wall, his mouth bleeding.

The sphere came to a graceful stop thirty feet above the hunters and the de-grav platform lowered a woman toward the canyon. Surrounded by the faintly opaque capsule of her protective force-field, she moved toward them, a beautiful, dark-haired woman clothed in white.

This was Tak Laleen, the alien missionary assigned to the Santa Barbara area. She lived in the Chapel of the Triangle. Under the terms of the surrender treaty, the missionaries of the Almost-men were guaranteed immunity to preach and work in the treaty areas. They were selfless, generous and kind, yet men abhorred them, for they represented the tangible power of the conqueror.

Tak Laleen glided toward the hunters, forming the alien's triangular sign of peace with her small, white fingers. "I come in peace, in the name of the All of the Universe."

"We haven't violated any regulation," Gill snapped stiffly.

Barlow sidled toward her. "Take me back to the Triangle," he begged. "I'll tell you—"

Gill's fist lashed out again; Barlow reeled under the blow. "We're a legally elected punishment squad," Gill lied. "This man has broken a community law."

"You don't understand!" Barlow cried desperately. "They came to get—"

The others hunters fell on him, pummeling him into silence. The violence sickened Lanny, yet what alternative did they have? Lanny raised his club. At the same time

the missionary came closer to the mob, and his club touched her forced-field capsule. Normally the energy would have paralyzed him with pain. But his mind refused to accept the normal, and Lanny felt the same sort of integrated unity with the energy field that he had with his hunting club. Command over the matter structure of the field. The energy flowed into his body and was absorbed, stored in an explosive concentration of power.

For a moment the opaque capsule dimmed. Tak Laleen clenched her hand over her mouth and fled into her sphere. The car soared up above the canyon.

Lanny swung his club again. Since Barlow must die, let him die quickly, without pain. Murder!—the accusation was a pang of agony in Lanny's mind. This violated everything Juan had taught him. He was aware that he wanted Barlow's death not because the old man had tried to betray the hunters, but because Lanny could not answer Barlow's poisonous despair in any other way. Lanny was ashamed. But who would know his real motive if he killed Barlow now? Who—but himself?

Lanny's club touched Barlow's chest. He felt a drain of energy, a disintegration of structure. The energy Lanny had absorbed from missionary's force-field exploded in a fierce, white heat. Barlow crumbled into dust.

Lanny's awareness of what he had done survived for a fraction of a second. He stood facing the exploding light and waves of concussion lashed at his body. A dark chaos, whipped into fury by a floodtide of guilt, rocked his mind. He willed himself into unconsciousness, a bleak forgetfulness that sponged the guilt—and the truth—from his mind.

And now he remembered nothing but the explosion and the queasy shadow of self-accusation.

"The settlement," Juan Pendillo said to his sons, "is required to surrender the hunters at dawn. That gives us forty-five minutes. We're all heading for different treaty areas. We are to go to the San Francisco colony."

THE THREE men slid along the street, clinging to the shadows. Twice they passed other hunters in flight, but no one spoke, for the enemy sound detectors on the Chapel of the Triangle were sensitive enough to pick up a whisper at a distance of half a mile. Lanny and Gill discarded their moccasins, in order to be more sure of their footing. The moccasins were useless except as symbols of status. Juan Pendillo qualified to give the extra skins to his sons, since before the invasion he had been a Doctor of Philosophy, and the teachers had become the governing force in every treaty area.

For two hours Pendillo and his foster sons walked north. Occasionally they saw enemy spheres overhead, but the ships never came closer. After they reached the coast, the pounding surf formed a protective sound barrier when they talked.

"How far is the San Francisco

treaty area?" Gill asked.

"Three hundred miles, more or less," Pendillo replied.

"How many days?" Lanny inquired. His father, like all the older survivors in the settlement, always spoke of distance in terms of miles—a word that was meaningless to the new generation.

Pendillo laughed, with gentle bitterness. "Once, Lanny, we might have made it by car in eight hours. Now?—I don't know. The couriers sometimes do it in a week, when the weather is good. It will take us longer. I won't be able—" He cut himself short. "It's funny, isn't it? In the old days I used to gripe about the traffic; right now I'd give ten years of my life to see a Model-T again."

Gill ground his naked heel into the sand. "The Almost-men took everything from us. But we're not licked. One of these days we'll be strong enough—"

"As strong as their machines?" Lanny asked.

Gill swung toward his brother angrily. "That's Barlow's kind of talk, Lan."

"The weapons and the machines of the Almost-men," Pendillo said, "are more powerful than anything we ever had. Yet we must defeat them; we must make ourselves free again. And we shall; I have no doubt of it. Granted, we have no weapons like theirs, and no chance of building any. We still don't resign ourselves to defeat. The techniques we used in the past failed; then we must find new ones. How? I don't know. That's the problem our generation leaves to yours. Men live by their dreams; without them we are nothing."

The three men continued to move north along the beach until they came to the barrier that marked the northern boundary of the Santa Barbara treaty area. The barrier was a series of widely separated pylons marching across the land. Each pylon served as a pedestal for one of the enemy's highly sensitive sound receptors and an automatic energy gun. Any sound detected within seventy feet of the border became instantly the focal point for a stabbing beam of disintegration. Yet men crossed the barriers at will. Couriers traveled freely from one treaty area to another, and hunters crossed the border because the animal life in enemy territory was more prolific.

They had two methods for passing the pylon guns. Sometimes they swam to sea, circling the barrier beyond the range of the sea-coast receptors. The second technique, used by the inland hunters, was to confuse the listening machines. The hunters would hurl half a dozen stones into the barrier area. While the energy guns obediently disposed of the rolling rocks, the hunters sprinted across the forbidden ground before the guns could concentrate upon the second target.

Both Lanny and Gill preferred to run the guns. They enjoyed the risk of defying the enemy machines. But Dr. Pendillo shook his head. It meant sprinting a distance of a hundred yards in less than nine seconds—the time it took the guns to reorient their target.

"Before the invasion," Pendillo

explained, "the fastest man on Earth ran a hundred meters in a little over ten seconds. You boys are a new breed. You've been forced to adapt; I'm too old." Pendillo's eyes were suddenly serious. "Adaptation," he repeated. "The possibilities are infinite for a man who is free from convention, free from the inherited ideas of his past. That is the way we shall defeat the Almost-men. The human mind has an unmeasured capacity for solving problems—for pulling itself up by its bootstraps—so long as hope for a solution remains alive."

They passed the barrier by swimming a quarter of a mile to sea. They rested briefly when they returned to the beach. Then they resumed their march north again, through territory ceded to the enemy. They stayed close to the beach, until their passage was barred by an increasingly rocky coastline. Since they had seen no enemy police spheres since they left the treaty area, Pendillo thought it was safe for them to use the highway which paralleled the beach.

After nearly twenty years, the ribbon of asphalt was still in good repair. Occasional cracks had broken the paving. Grass and weeds choked the crevices and some culverts had been washed out by spring rains.

The primary change was environmental, but only Juan Pendillo was aware of that, for his sons took for granted the young forests that crowded every hillside and the abundant wild game. With no more than a ten minute interruption in their march northward, Lanny and Gill ran down a rabbit and a pheasant, killing them with skillfully hurled stones—the traditional weapons of the hunters. They cleaned the kill and strapped it to their weapon belts.

Late in the afternoon they entered Santa Maria. The town had not been large, but it was the first relic of their defeated culture that Lanny and Gill had ever seen. Sometimes, when their hunting took them south, they saw the site of Los Angeles, but that told them nothing about the past, for it was a flat desert scrubbed clean of rubble to make room for an enemy skyport. Santa Maria had survived the invasion, since it was too isolated from the major centers of population to have been a target of the enemy guns.

Lanny and Gill stood in the empty main street and looked with awe at the deserted stores. Some of the buildings were made of brick; some were actually two and three floors high. This must, surely, have been a great city of the old world. They had no point of reference but the monotonously identical houses of the subdivision which had become their treaty colony. Here the buildings were all different and by that fact alone they seemed beautiful.

Lanny and Gill stopped at each store window, to stare in wonder at the goods still on the shelves. In an automobile agency, a solitary sedan still stood, on deflated and frayed tires, in the center of the showroom floor. Here at last was visible proof that men had once built a machine technology. The automobile was as

big and as shiny, beneath its generation of dust, as any of the spheres of the Almost-men.

"Were they all like that?" Lanny asked in an awed whisper.

"Fundamentally, yes," Pendillo said.

"And they moved over the roads faster than a deer!" Gill's eyes glistened. "But where are the weapons, father?"

"Our cars weren't armed, Gill; we used them for pleasure. But don't get me wrong. We had guns —vicious and terrible things; we were no more civilized than the Almost-men. Our weapons just weren't the equal of theirs, so our civilization was destroyed."

"You're saying the Almost-men are better—"

"No, Gill. The Almost-men are mirror images of ourselves—man at his worst. That's why we understand each other so thoroughly," Pendillo paused before he added, "And that's why we can't destroy them on their terms; we must make our own."

They pushed open the door of the agency and went into the showroom. Hesitantly, like children with new Christmas toys, they ran their fingers over the dusty hood of the sedan. Lanny felt a strange, electric empathy as he touched the cold metal, as if it were a familiar part of himself. For a moment he saw in his mind the geometric structure of the alloy atoms, just as he could visualize the more complex cell make-up of his own body. Judging from the expression on Gill's face, he guessed that his brother had perceived the same relationship.

"And the Almost-men took all this from us," Gill said in a choked voice. "Why, Juan?"

"In our wars among ourselves, we always had the same motivation. They came here for resources. Every skyport they have built on Earth continuously ships out tons of metal and chemicals—oil, coal, ores. On their home world the Almost-men have exhausted their own resources; they must have ours to keep their mechanistic civilization going."

Juan opened a door at the rear of the showroom into a large, cement-floored garage. Except for three automobiles, abandoned twenty years before in various stages of repair, the room was empty. "We can spend the night here," Pendillo decided.

Lanny and Gill pried open the door at the back of the garage. Behind the building tangled shrubs and live oaks choked the half-mile shelf of land that separated Santa Maria from the coast. They found a ready supply of dry firewood under the trees.

It was dusk. The setting sun was veiled in a mist. Fingers of fog reached hungrily for the warm earth, driven inland by the wind. Lanny and Gill would have been more comfortable outside. They were accustomed to the chilly night air. They could have burrowed sleeping troughs in the soil and restored their strength with earth energy.

It had always puzzled them that the older survivors, like Juan, could not do the same. Pendillo's generation made very poor hunters, too,

often dying of a wheezing sickness if they spent many nights on the trail.

Pendillo's sons carried wood into the garage, where Juan sat shivering on a wooden bench with his rabbit-skin jacket hunched around his shoulders. Lanny and Gill stripped off their jerkins and gave them to their father.

Pendillo's sons were naked, then, except for their short, crudely cut breeches and their leather weapon belts. And only the belts, which held their stone knives and their clubs, would either of them have considered essential. The rest was superficial, a mark of status. In a general way Lanny and Gill were physically alike—sturdy, bronzed giants, like all the children who had survived in the treaty areas. They were both nineteen, or perhaps a little older. Dr. Pendillo had found them abandoned as he fled the final enemy attack. Gill's hair was yellow and a pale beard was beginning to grow on his chin. Lanny's black hair curled in a tight, matted mane; his beard was heavy, already covering much of his face and giving him a sinister, derelict appearance. Since metal was forbidden in the prison compounds, no man was clean-shaven. After a fashion they did occasionally trim their hair, with treasured slivers of glass which foraging hunters brought back from the ruined cities.

Lanny and Gill made fire in a rusted waste can. Pendillo watched them with admiration. That was another shortcoming in the older survivors that puzzled Lanny: they were very clumsy about producing fire, and almost none of them could hurl a stone accurately enough to kill an animal. Yet both skills, so essential to the hunters, had been taught the children by their elders.

On an improvised wooden spit Pendillo's sons roasted the pheasant and the rabbit which they had killed that afternoon. The three men ate hungrily, Pendillo with a fastidiousness that secretly amused the bronzed giants who sat cross-legged beside him. Dr. Pendillo tore the meat daintly from the bones with his fingers; at intervals he wiped the grease from his lip with a corner of his jacket.

Pendillo built a bed for himself from a pile of dry, rotting rags close to the fire. Lanny restoked the can with fresh wood so his father might be warm during the night. Then Pendillo's sons spread their skins close to the open door, where they felt more at ease.

Almost at once Lanny was asleep. It was an instinctive process of will. He ordered his body to rest, and it responded; just as he could be instantly awake and alert at any energy change that indicated danger. He had never examined the process consciously, and he considered it in no way unusual; but he might have recalled, if he had pressed his memory back into his earliest childhood, that it was part of a pattern Pendillo had taught his sons.

There was a sputter of sound. Lanny leaped to his feet, his hand closing on his stone knife. He heard a roar of clanging metal in the automobile showroom. Then silence.

Lanny sprang through the open door. Dimly he saw Gill sitting in

the sedan, his hands gripping the wheel.

"What happened?"

"It started, Lanny. I just came in to look at it, to touch it again, and—"

"So you made the motor turn over?" This came from Dr. Pendillo, who was feeling his way through the door behind Lanny. "How, Gill?"

Gill slid out of the car, backing away from it. "I don't know. I don't know!"

"You must, Gill."

"I got in. I was—I was pretending it was before the invasion and I was driving the machine down the road. I could see the matter structure of the motor in my mind, and how the parts fit together. I must have touched the starter."

"After twenty years, the battery would be dead and the fuel would have evaporated. Tell me what you really did, Gill."

Gill clenched his fist against his mouth. "It seemed as if it were a part of me, like my hand. And then the machinery began to move, because—because I wanted it to. Maybe there was some fuel left, father, and maybe—"

"Why are you afraid of the truth, Gill?"

"People don't run machines by wanting them to go!"

"The thinking mind, my son, is capable of—" Pendillo's voice trailed off, for they all heard the sound outside—the high whine made by the force-field of an enemy sphere.

Lanny darted to the showroom window. At the end of the street an opalescent sphere was riding in the fog, three feet above the ground. Enemy police guards in protective capsules spilled through the open port, carrying energy guns slung over their shoulders.

"The Almost-men picked up the sound of the motor," Pendillo gasped.

Then he saw the woman in the white uniform of the Triangle. She stood at the port, spotlighted by the glow of blue light that came from within the ship.

It was the missionary, Tak Laleen.

IN THE street the tracer light began to dart back and forth over the empty buildings, responding to the commands of the sound receptors. Lanny and Gill seized their father and plunged into the choking darkness of the forest. Dead brush snapped. The tracer light swung toward the trees, concentrating with smug, mechanical self-assurance upon the place where the three men had been. Lying flat against the cold earth, they wormed their way foot by foot toward the coast.

Behind them they saw the force-field capsules of six enemy guards floating above the trees. Strong tracer lights danced over the upper branches, but the foliage was too dense for the light to penetrate to the ground. In their glowing bubbles the enemy police swung back and forth, trying to find a clearing in the brush. Two of them attempted to force their way into the trees but their body capsules were too

bulky; the force-field generated by the individual envelopes was not powerful enough to push through the gnarled branches.

The three fugitives inched steadily forward. The glow of tracer lights faded behind them. They could hear the wind above the trees and, far away, the sound of surf breaking on the rocks.

Juan Pendillo was shivering in the cold. His teeth began to chatter. Hastily his sons pressed his body between theirs, shielding him from the cold and sharing their body energy until his trembling finally stopped.

They heard a snapping sound in the brush. An enemy guard appeared suddenly. He had dissolved his force-field and he was walking warily on the wet earth. He held an energy gun cradled in his arms. The enemy walked with cat-like caution—but, in spite of himself, it was the amateur caution of a man who relied on the protective devices of a machine.

Slowly Lanny's lips twisted in a sneer. This was the enemy, heavily armed and invulnerable—but helpless without his mechanical gadgets. Lanny's hand moved soundlessly over the ground. He grasped a stone. The enemy was less than twenty feet away; it was a target a child couldn't miss.

Lanny swung into a sitting position and simultaneously threw his stone. The guard dropped, a wound torn in his skull. Pendillo and his sons slid forward again. As they passed the dead Almost-man, Lanny worked the energy gun out of of the guard's hands.

It took them an hour to reach the cliffs overlooking the sea. They turned north again, seeking shelter among the rocks. And they came abruptly upon a wide, bowl-shaped cavity in the earth. Through the fog they saw the narrow passage between the cavity and the sea. In the center of the sheltered, artificial pool a metal dome rose some fifty feet above the quiet water. The dome, protected by a force-field, was joined to the land by a catwalk. From its waterline a ridged, white tube snaked upward and disappeared among the trees on the north bank of the pool. A repair barge swung at anchor under the catwalk. A towering pylon raised a sound receptor and an automatic energy gun high above the roof of the dome.

Pendillo whispered, "This must be one of their automatic mining operations. I've never seen one before."

Gill replied, "Lanny and I have come upon lots of them in the hills. The domes run themselves. Sometimes the Almost-men come and check over the machines; that's what the barge is here for, I think."

"The domes dig out minerals or pump oil," Lanny added, "and send it to the skyports through the white pipes. But you can never get close to them. The whole operation is protected by the energy guns."

"They have us pinned down here," Gill said, "unless we can use that barge."

Lanny fingered the energy gun he had taken from the dead guard. "All we have to do is knock out the pylon." He raised the weapon and

aimed it at the nest of delicate instruments at the base of the pillar. He turned the firing dial. The flame knifed through the fog. The tower disintegrated in a blaze of dust.

The three men slid down the rock and plunged through the cold water toward the barge. In the night sky they heard the whine of an approaching force-field car.

They leaped aboard the barge, hauling Dr. Pendillo in after them. Gill knelt in front of the motor in the stern. Lanny watched the sky, with the energy gun clutched in his hand. He knew the charge in the chamber was nearly spent. There might be enough left to hold off the enemy for a moment, but certainly no longer.

Frantically Gill turned the wheels until the motor stirred into life. As it did the glowing sphere swung down upon them. Lanny raised his gun and fired. Fear projected something of himself into the leaping charge of energy—a confusing sensation of screaming joy and chaotic horror that left his mind limp and numb. It seemed that he had actually touched the force-field of the sphere; he was physically tearing apart the tense, strait-jacket of solidified energy.

The sphere lurched upward and away into the night. As it did, the port broke open and a figure dropped toward the water. It was Tak Laleen. She reached for the tiny box fastened to her breast, trying to activate her protective force-field capsule. Lanny knew he had to stop her, or she might still be able to prevent their escape.

He sprang into the water, clawing for her feet as she fell toward him. She screamed and her screams died as he dragged her beneath the surface. He tore the box from her hands and let it fall.

When they broke the surface, his hands were on her throat and all his lifelong hatred of the Almost-men was in his finger tips as he pressed his thumbs down upon her windpipe. Pendillo cried out,

"Don't kill her, Lanny! No man has ever taken one of the enemy alive."

Reluctantly Lanny relaxed his grip. Tak Laleen screamed again and slapped her hands at his face. Abrubtly she paused and stared into his eyes.

"You!" she gasped. "The black savage. No wonder my sphere— In the name of the All of the Universe, kill me quickly! Kill me now, as civilized beings have a right to die—not your way. Not your way!"

Then, for no reason Lanny could fathom, Tak Laleen fainted.

SHELTERED BY the mist and the darkness, the stolen barge moved rapidly north along the coast. Tak Laleen lay unconscious in the bottom of the boat, wrapped in her white uniform; Pendillo sat shivering beside her. Lanny and Gill stood in the stern. Although the motor was controlled by an automatic navigator, Gill tore out the flimsy destination tape and guided the wheel manually.

"Even this the Almost-men can't do for themselves," he remarked to his brother.

"Do you suppose they really can't

read direction from the sun or the stars?"

"All their brains are in their machines."

"And machines are nothing."

"Juan has always said that," Gill said slowly. "It sounds logical and reasonable. But I don't know what it means, Lanny!"

For a long time they stood watching the heaving shadow of the sea, each of them trying in his own way to make sense of the riddle. Suddenly the motor sputtered. Gill tinkered with the machine until it was purring smoothly again.

"The power cells are nearly empty," he said. "We'll have to run the barge aground sometime tomorrow and start walking again."

"Yes, I know." Lanny clenched his fist over his brother's arm. "But how do we know it, Gill? How can we run this machine, when we have never seen it before?"

Gill laughed uneasily. "Don't forget, before the invasion our people were pretty good at building machines, too."

"That doesn't answer the question, Gill. When I fired the energy gun, I felt as if it were a part of myself—as if I knew all the cells in the metal just as I know my own."

"That happened to me when I sat in the automobile in the showroom."

"It scares me, Gill. I keep thinking I should remember something but—"

"I was scared last night, too, because I thought I'd made the motor go by forcing it to move with my mind. And that's absurd. If we had that much control over machines, as we do over our hunting clubs, how could the enemy ever have defeated us?"

Tak Laleen opened her eyes, then, and sat up stiffly. The wind struck her face and swept her hair back. Shivering, she pulled her uniform tight around her throat.

"Where are you taking me?" she demanded.

"You're our prisoner," Lanny answered.

"The Sacred Triangle will not pay ransom we volunteered to serve here on the earth; we knew the risks."

Lanny moved toward her. Fearfully she slid away from him until her back was against the gunwale. "Don't touch me!" she begged.

He shrugged and dropped on the deck close to her feet. "When you came out of the Traingle to take care of our sick, you never were repulsed by—"

"Not the normal ones, no."

"Your aversion applies only to me?"

"Don't pretend." She twisted her hands together. "What kind of a—a thing are you?"

Juan Pendillo intervened, "We dragged you aboard rather unceremoniously, Tak Laleen. Let me introduce my sons, Lanny and Gill."

"You're lying. Where did you get the metals to make him?"

Lanny stared at his father. "Is she—has her mind been affected—"

"All this beating around the bush is so foolish." Suddenly she seized Lanny's arm and dug her nails, like claws, into his skin. "But—but it is real! You're not a machine." Her eyes glazed and she fainted again.

By dawn the motor of the barge was missing continuously and the speed had been reduced to a relatively slow forty knots. The sun rose, dispelling the fog, and the wind on the sea became a little warmer. Juan Pendillo tried to pace the tiny deck, flaying his arms to restore the circulation. Tak Laleen, having recovered from her second faint, sat brooding with her uniform clutched tightly over her throat.

Periodically the missionary talked to Pendillo. She asked again and again what they were going to do with her. Either ransom or murder were the only possibilities that occurred to her. That point of view was a fair index to the attitude the Almost-men held toward the survivors on the planet they had conquered. Mankind they considered filthy, illiterate barbarians; the primitive squalor of the prison compounds was their proof.

Lanny understood enough of the religion of the Triangle—that noble abstract of God which the enemy called the All of the Universe—to know why the conquerors had to use a semantic device to define their superiority. The Almost-men were a liberty-loving society. Their government decrees and their religious poetry abounded with vivid words of freedom. They could not have maintained an integrated social soul and enslaved a culture of their peers; therefore, they had to invent a verbal technique for reducing man to the status of a savage.

"As we have always done ourselves," Pendillo told Lanny when he first became aware of the inconsistency as a child. "But don't condemn the enemy for it, my son. Words have the peculiar habit of becoming anything we want them to be. If we set our minds to it, we can make anything true. The Almost-men are not merely alien invaders; they are like man himself—the most tragic distortion of our worst traits. Someday we shall make war on them, yes, but before we do we must learn how to conquer ourselves."

Early in the afternoon the power cells in the barge were exhausted. Gill drove the ship up on a desolate beach, at the place where Monterey had once stood. Nothing survived but an occasional piece of debris, buried in the drifted sand, for Monterey, close to a military camp, had been heavily bombed by the invaders.

"We must find a place to camp," Pendillo advised. "I don't believe either Tak Laleen or I have the strength to go any farther today."

They found it necessary to hike eight miles north of Monterey before they were beyond the area of total destruction. The ruins, scattered among the encroaching trees, became recognizable as skeletal relics of things that might once have been homes. They found one frame cottage still whole because it had been built close to a hillside. The battered walls would provide shelter for Pendillo and the missionary. Further, the house had a stone fireplace where they could cook their food, and close by a shallow spring bubbled from the dark earth.

Gill and Lanny trapped a deer and carried the carcass back to the

cottage. Both Tak Laleen and Pendillo were struggling to make a fire. Lanny took over the chore and in seconds flames leaped through the dead brush heaped on the hearth. It had always puzzled him that Pendillo could have taught him the techniques, and still not be able to make the fire himself. Tak Laleen was just as helpless. Without their machines the Almost-men were nothing: again and again that became apparent.

Gill stripped off the deer hide carefully so it could be made into a second jacket for Pendillo. While he stretched the skin the afternoon sun, Lanny turned the meat over the fire. When they began to eat, both Lanny and Gill were amused that Tak Laleen had manners as fastidious as Pendillo's. The missionary nibbled delicately at her food, as if she thought the grease would soil her lips. Afterward she and Pendillo washed in water which they heated over the fire. Pendillo's sons stripped and swam in the ocean, as a man properly should to make himself clean.

They made beds for their father and the missionary in front of the fire. Lanny and his brother would have been willing to continue the march north until nightfall; the food had restored their balance of energy, as it always did. But they knew the other two had to rest.

Lanny and Gill dug burrows in the warm sand outside the cottage, where they felt more comfortable. They were consciously an integrated part of their world, nurtured by the earth and the sun. To them it seemed absurd to build walls of wood or stone to separate themselves from a part of their own being. None of the younger generation had ever understood the need of their elders for artificial shelter. That feeling, too, was a product of of their education, though neither they nor their teachers grasped what it implied. The children of the prison camps lived in a new universe, not yet defined.

Lanny and Gill were immediately asleep. It did not occur to them that Tak Laleen might try to escape. They assumed she had read the signs of the plentiful game in the forest: they were a long way from any enemy installation.

Yet four hours later they were jerked awake by the sound of her screams, faint and terrified in the night shadows of the forest. They found her a thousand yards from the cottage. Her back was against a wall of boulders and with her frail, white hands she was trying to beat off a snarling cougar which had already clawed her uniform to shreds.

LANNY DREW his knife and leaped at the animal. Gill threw a stone which might have broken the skull with bullet force, but at that moment the cougar whirled toward them. Its claw slashed at Lanny. He bent low, driving his knife upward. Momentum carried the big cat forward. As the tearing fury struck his chest, Lanny plunged his knife again into the thick hide.

The cougar fell, writhing and howling. Gill smashed a broken tree limb into the yawning jaws, and the big cat died. Tak Laleen

stumbled toward them. She tried to speak. The words of gratitude choked in her throat and she fainted.

Again! Lanny thought, with disgust. The Almost-men—or at least their missionary women—had a limited gamut of emotional reactions. It seemed an inadequate way to solve a problem.

They left Tak Laleen where she lay. Gill expertly stripped off the skin of the animal they had killed, another hide they could fashion into a jacket for Juan Pendillo. Lanny had been superficially wounded—a long, shallow scratch across his chest. He examined it carefully, feeling through the severed body cells with his mind and directing the blood purifiers to seal off the few germ colonies which were present. When the skin seemed to require no healing exposure to the sun, he allowed the scratch to heal at once.

Gill shouldered the cougar hide, still warm and dripping blood. Lanny picked up the missionary and they returned to the cottage. Tak Laleen's uniform was torn and useless, but the material was a tough plastic which had protected her from any serious wound. Her chest and arms were criss-crossed with scores of tiny abrasions. It puzzled Lanny that she had made no effort to repair her body. It occured to him, with something of a shock, that the Almost-men might use machines to do that, too.

Tak Laleen regained consciousness when Lanny put her on the bed in front of the fire. Pendillo tore off her battered uniform and bathed the scratches with hot water.

"You saved me; you risked your own life!" She said it with a peculiar fervor. Lanny couldn't understand why she thought an element of risk had been involved. A hunter with half his skill and experience could have done as much.

"I won't try to run away again," she promised. Not much of a concession, Lanny thought, suppressing a grin.

Pendillo said they would have to spend the next day in the cottage, to give the missionary a chance to rest. She was suffering, he said, from something he called shock. Precisely what that was neither of his sons knew, but they supposed it was an obscure ailment that beset the enemy. The more they learned about Tak Laleen, the stranger it seemed that such a weak people could have conquered the earth.

During the interval of waiting, Lanny and Gill dried the two hides they had taken. They cut breeches and a jacket for Tak Laleen, to replace the uniform she could no longer wear.

After they resumed their trek north, it took them four days more to reach the pylon barrier south of the San Francisco treaty area. Tak Laleen became more and more exhausted. She shivered constantly in the cold air. Her nose began to run —a phenomenon Pendillo called a cold—and the wounds in her chest stubbornly refused to heal. When she saw the towered guns on the barrier, she dropped to the ground and wept hysterically.

"We can't pass that," she whispered.

"If you're afraid to run the guns," Lanny told her, "we can swim around them."

"I don't know how."

"There's no other way into the treaty area," Gill said brutally.

She sniffled. "If I could just feel warm again—if you would build a fire and give me a chance to rest—"

"Not until we're inside the barrier. The police would spot a fire out here."

Gill picked her up and began to carry her toward the beach. She screamed in terror and beat her fists against his naked back. When he did not stop, she cried out,

"I can tell you how to break the circuit on the pylons!"

Gill paused. "Yes?"

"If we could knock out just one of the guns, we could walk through the barrier, couldn't we?"

Gill set her on her feet. She ran back to Lanny, stumbling over the rough ground and wiping her nose with the back of her hand. "Lanny, you and your brother can hit anything with a stone. Couldn't you knock out the power unit in a pylon?"

"Sure, if we knew where it was. We've tried for years to find that out, but we can't get close enough to examine the towers."

She pointed eagerly. "It's the criss-crossed framework, just under the sound receptor at the top."

He measured the distance critically. "It will take careful marksmanship to hit anything so small. Think we could do it, Gill?"

"We'll have to try; the lady's afraid to get her feet wet."

Gill threw the first stone. It fell short of the target. The automatic energy guns swung on the stone, efficiently disintegrating it before it touched the ground. Lanny tried; and his brother threw again. It was Lanny's fourth missile that struck the tiny mechanism. A puff of smoke filled the air and the top of the pylon became a mass of twisted, metal girders.

Lanny grinned at the missionary. She was a fool, he thought; for the sake of her own comfort, she had given away one of the most valuable secrets in the arsenal of enemy weapons. When the treaty areas knew it, the barriers would go down; men would be free when they chose. And Tak Laleen was so grateful to have escaped a cold swim in the sea, she seemed unaware of the extent of her betrayal.

They walked across the barren ground. The missionary clung with feverish hands to Lanny's arm. Half a mile beyond the barrier, they ascended a steep hill. From the crest they looked down upon the peninsula and the sprawling arms of the bay in the background.

Except for the jumbled ruins of downtown San Francisco, at the point of the peninsula, the land from the ocean to the bay was crowded with closely packed rows of dwellings. Some were flat-roofed, whitewalled houses similar to the subdivision settlement where Lanny and Gill grew up. Others, built since the surrender, were ugly hovels made from clay and grass.

The San Francisco treaty area was the largest on Earth, perhaps because it was the city where the

invasion had begun. Lanny had always known it was big, but he was awed to see so many men, so many of his own kind, assembled in one place.

Across the bay, on a flat, white plain where Oakland had once stood, was the crowded, multi-tiered skyport of the enemy. From all the surrounding hills the pliable, white tubes poured an endless stream of resources into the port. Automatic machines, working ceaselessly day and night, loaded the plunder into machine-navigated, pilotless spheres; at five minute intervals an endless parade of spheres lifted from the field beyond the skyport and headed toward the stars, while a second parade of empties came in for a landing.

From a distance the skyport, under its opalescent dome of a force-field, looked like an enormous spider with its sprawling, white tentacles clutching the green earth. The San Francisco skyport was the largest the enemy had built, and the seat of the territorial government they had set up to rule the captive planet.

Grotesque relics of man's bridges still spanned the bay and the Golden Gate; columns of rusted steel held up the graceful loops of a single, rusted cable. An enemy bridge, like a fairy highway supported by nearly invisible balloons of de-grav spheres, joined the skyport and the treaty area.

As the three men and their captive descended the hillside, they were stopped by four nearly naked youths who mounted guard on the southern fringe of the settlement. Though still boys in their teens, they were physical giants like Lanny and Gill. Pendillo told the boys why they had fled from the Santa Barbara settlement; he asked to be taken to the home of Dr. Endhart.

"Our chief teacher?"

"Dr. Endhart and I are old friends. We knew each other before the invasion."

One of the boys clapped Lanny on the back. "So you brought your woman with you; they must be snappy lookers down your way."

Tak Laleen shrank against Lanny's side, holding his hand in terror.

"Not much for size, though," the boy added critically. "How much do you weigh, girl?"

The boy put his arm around the missionary's shoulder. She gave a squeal of fear and, in her eagerness to shrink still closer to Lanny, she forgot to hold her crudely cut jacket closed across her breast. The hide fell free. The boy saw her white, scratched shoulder and her thin, frail arm.

He whistled. "So you caught one of the Almost-men. A missionary? I never saw one without the uniform. Let's see the rest of it."

He snatched the jacket from Tak Laleen. She gave another wail and fainted. Lanny sighed and picked her up.

"She has a habit of doing this," he explained wearily. "She hasn't pulled one for nearly four days; I guess this was overdue."

The boy inspected her with a sneer. "Scrawny, aren't they?"

"Take away their machines," Lanny replied, "and this is all you have left."

LANNY AND his brother made an easy adjustment to the new community. The social stratification was an uncomplicated division of men into three types: the teachers, the old ones who had survived the invasion, and the children who had grown up since the war—by far the largest group. The classification was logical and unobtrusive; it produced no frustrating social pressures. Since the children had known no other form of society, they assumed that men had always organized their culture with such understandable simplicity.

The chief occupation of the community was always the education of the young. That, too, Lanny and Gill assumed to be the normal activity of man. The teachers were the real government of every treaty area. Their control was subtle, engineered through an unofficial—and illegal—representative body, usually called the resistance council.

Since Pendillo had been a teacher in his home settlement, he took up residence with Dr. Endhart. They kept Tak Laleen with them, a prisoner confined to the house. For nearly a week she lay on a pallet suffering the miseries of a cold. Lanny knew that older survivors in every settlement sometimes had the same malady. Pendillo had taught his sons that sickness happened because some of the survivors of the invasion had been so demoralized by defeat they had lost the mental ability to control their own physical processes. But Tak Laleen was one of the conquerors; nothing had demoralized the Almost-men. There was only one possible conclusion Lanny could reach: the invaders had never learned to control the energy units in their body cells.

A hunter's assignment, Lanny found, was easier than it had been in the smaller Santa Barbara settlement. The Almost-men had set up a vast hunting preserve north and east of the bay; it was kept well-stocked with game. There was no need for the hunting parties to break through the pylon barrier and raid territory ceded to the invaders. The hunters simply crossed the skyport bridge, circled the opalescent dome, and entered the forest, where broad trails had been conveniently laid out under the trees.

This generous provision came about because the enemy considered the San Francisco compound something of a showplace, an experimental laboratory for improving relations with the conquered. A steady stream of tourists, sociologists, politicians and religious leaders poured into the San Francisco skyport from the mechanized home world of the Almost-men. They came to satisfy their curiosity, to purchase tourist relics, to examine and sometimes criticize the occupation policy.

Frequently, when Lanny was hunting in the forest, he saw Almost-men who were recent arrivals in the skyport. Usually they floated above the trees in their individual, degravitized, force-field capsules, watching the hunt and eagerly recording the activity with their expensive cameras. Sometimes they whipped up enough courage to descend to the forest trails and talk to their captives.

Several times Lanny was interviewed by the enemy, and slowly he began to flesh out a more realistic definition of the Almost-men. They were no longer a clear-cut symbol for something he hated, but suddenly more human and more understandable. They were physically weak, just like the older survivors in the treaty settlements. They were timid and unsure of themselves. They were hopelessly caught in a mire of pretty words, which they seemed to believe themselves. And without their machines they were helpless.

After Lanny and his brother had been in the San Francisco area for nearly two weeks, they were invited to a formal session of the local resistance council, where they were accepted as new citizens of the community. The delegates met at night in the rubble of the old city. A narrow passage tunneled through the ruins to an underground room which had once been the vault of a bank and had, therefore, survived the bombing and the slashing fire of the energy guns.

Gill did not stay with his brother in the rear of the vault. Instead he joined the young hotheads who formed the war party in the local council. At home Gill had dominated the same element.

The men in every treaty area were split between two points of view. One group wanted to organize an immediate attack upon the invader, in spite of the inequality in arms. The others counciled caution, until they had the strength to strike a real blow to free the Earth.

Since men had no weapons and no metals from which to make them, the obvious basis for any successful attack had to be a scheme for seizing arms from the enemy. "We can only destroy the Almost-men if we use their own machines." Again and again the San Francisco war party repeated that fact; it seemed an argument so self-evident that it was beyond any rational challenge. "The machines have no intelligence, no sense of values; they will obey us just as readily as they obey the enemy."

"More so." Gill spoke clear and loud, in crisp self-confidence. "I do not believe the enemy knows how to feel the structure of matter."

This statement created a minor sensation. The heads of the delegates turned slowly toward Gill. Gill was smiling, his mane of blond hair shimmering like gold in the flickering light. Lanny felt, as always, a tremendous admiration for his brother. Gill was so sure of himself, so certain that he was right. Gill's mind would never have been plagued by shadowy fears he couldn't understand.

"I have seen an enemy bleed," Gill went on. "They do not know how to heal a wound."

"That might be true of some," one of delegates answered. "Some of our old ones have forgotten, too. But you spoke as if the individual community of cells could be extended to include integration with all external matter."

"By touch; I have done it myself."

"You mean the extension into the energy units of your hunting

club." The delegate smiled deprecatingly. "We all understand that. But a wooden club was once a living thing. Community control over other forms of matter is entirely different."

"No, the machines respond the same way. I made a motor turn over, when it had been idle and without fuel for twenty years. It frightened me when it happened. The energy in the metal was something new, and I couldn't understand the structure at first. But I've thought about it since, and I'm sure—"

"We'll look into the possibilities —after we capture the enemy machines. Our problems at the moment is to get the machines."

The delegates returned to their discussion. They had agreed, long ago, that the only way to attack the skyport was from inside the protective, force-field dome. For years the Almost-men had tried to encourage trade between the skyport and the treaty area, and the resistance council had turned that to their advantage.

Gradually they had increased the number of young men who went to the city with necklaces of animal teeth and meaningless gee-gaws for the tourist trade. The Almost-men had grown used to seeing a mob of men milling on the bridge and in the lower tiers of the city. The council had regularly altered the trading parties, so that every man in the San Francisco colony had been under the dome half a dozen times. They knew their way around in the skyport; they knew the location of the power station and the city arsenal. When the attack came, fifty men in the city would seize the power plant and the rest would attempt to take the arsenal.

One of the hotheads arose from his place beside Gill. "We have discussed this and argued it for almost as long as I can remember," he said. "There is nothing more to be said, for it or against it. Hasn't the time come to take a vote?"

A moderate protested mildly, "But have we weighed all the risks? If we make a mistake now—"

"Can you suggest a better way to get weapons?"

And the moderate admitted, "True, we can't defeat the enemy unless we have weapons comparable to theirs."

It was the last gasp of an old argument. Everything that could be said had already been said; every delegate knew both sides to the debate, and every delegate was driven by the same instinct to make a fight to reclaim his lost world. When the vote was counted, a majority of the council favored war. A committee was appointed to make the final disposition of forces and to set the time for the attack. Lanny was not surprised when Gill was named a member of the commitee.

On the afternoon following the meeting, Lanny was assigned to a group of traders so he might learn the geography of the skyport before the attack. As the enemy capital on Earth and a tourist attraction, the San Francisco skyport was a miniature replica of an enemy city. Under the dome were tiers of streets and walkways, interwoven

in complex patterns, and the battlement spires of luxury hotels, theatres, cabarets, public buildings. The streets overflowed with a flood of jangling traffic, and the air was filled with the well-to-do riding their de-grav cars in the enviable security of their private capsules.

Lanny's overall impression was a place of intolerable noise and glitter. The Almost-men seemed to make a fetish of their machines. They found it necessary to use their clattering vehicles even though their destination might be a building only one tier away. The air under the dome was fetid with the stench of vehicle fuels.

The trading area was confined to a small, metal-surfaced square on the lowest level of the city, close to the narrow, neutralized vent through the force-field dome. Tall buildings swarmed above the trading booths, blotting out the sun. Lanny felt boxed in, imprisoned by the high walls, choked by the artificial, filtered air.

He sold a satisfactory quota of trade goods to the tourists who had adventured down to the booths. And he dutifully noted the location of the walkway to the power center and the arsenal. But he gave a sigh of relief when his duty was done and he was free to go back across the bridge to the treaty area. He filled his lungs with the crisp, damp air, unsterilized by the fans of the enemy city. How could the Almost-men survive, he wondered, how were they capable of clear-headed thinking, in such seething confusion?

In the treaty areas, where men could put their naked feet upon the soil and feel the life-energy of the earth, where men breathed the fresh wind and held sovereignty over their environment—only there were men really free. Would he trade that for the city walls that blotted out the sun, and the monotonous throbbing of machines? The victor was the slave; the conquered had found the road to liberty. For the first time in his life Lanny understood the paradox. Stated in those terms, what did men actually have to fight for?

As he always did when he had a problem, Lanny went to Juan Pendillo. It was late in the afternoon. Already the cooking fires were being lighted on the small rectangles of earth in front of the houses where the older survivors lived. But Pendillo and Dr. Endhart were still inside, packing away the models which Endhart had used to teach his last class for the day. They usually waited for Lanny or Gill to make their night fire, since Pendillo's sons did the work so effortlessly. Tak Laleen was with the teachers. She sat on the only chair in the room, playing abstractly with one of Endhart's teaching tools—a crude mock-up of the structure of a living energy unit. It was the same sort of learning-toy Lanny himself had been given when he was a child.

Lanny burst in on them excitedly. He began to talk at once, trying to put in words the conviction that had come to him as he stood on the bridge. Suddenly the words were gone. In his own mind it was clear enough, but how was he to explain

it? How could he tell them it would be self-destruction to capture the city of the Almost-men?

"You wanted to talk to us?" Pendillo prompted him.

"It—it's this vote we've taken for war, father." Lanny glanced at Tak Laleen. His father and Endhart smiled disarmingly.

"You can talk quite freely," Endhart said. "Tak Laleen knows the vote has been counted. She knows what it means."

"Unarmed men are going to attack the city," the missionary said without expression. "You are very courageous people. But you are certain you will win—against our machines and our energy guns." With a frown, she put aside the model she had been holding. Her face was drawn and tense; there was doubt and fear in her eyes.

"Of course we'll take the skyport," Lanny assured her. "That doesn't worry me. It's what happens afterward—what we do when we have your guns and your machines."

Endhart and Pendillo exchanged glances, in subtle understanding. "The city will belong to us," his father said.

"Why do we want it? The city is a prison!"

The eyes of the elders met again "We need guns to protect ourselves. Haven't you always said that, Lanny? You've heard all the discussions in the council meetings."

"But do we, father? Answer me honestly."

"You can answer that better than I, my son."

Tak Laleen stood up, wringing her hands. "You will face the force-field and our guns—but you wonder if you need weapons." With an effort she checked the hysterical laughter bubbling in her throat. "My people would say you had gone mad; but who knows the meaning of madness?"

Pendillo took the missionary's hand firmly in his. "She's tired, Lanny. Our ways are still new to her."

"And we've had her cooped up in the house too long," Endhart added.

Pendillo glanced sharply at his friend. Endhart nodded. "It is time," he said cryptically.

Pendillo turned toward his son. "A walk outside would do her good, Lanny."

"Is it safe?"

"She won't try to escape; you and I will go with her."

Pendillo led her toward the door. Her face glowed with hope. She glanced eagerly down the long street, lit by the evening fires. Lanny was sure she was looking for the nearest Chapel of the Triangle, calculating her chances of escape. She was the enemy. What reason did his father or Endhart have to trust her so blindly?

At the door Pendillo turned for a moment toward Endhart. "You'll make sure Gill knows?"

"At the proper time; leave it to me."

"Knows what?" Lanny demanded.

"That we may be a little late for dinner," his father answered blandly. He nodded toward Tak Laleen and Lanny understood.

Lanny walked on one side of Tak Laleen and slid his arm firmly under hers. She kept running her fingers nervously over his arm. She tripped once, when her foot caught in a shallow hole; her nails tore a deep gash in Lanny's flesh as he reached out to keep her from falling. He healed the wound at once, except for a small area where the germ colony needed exposure to the life-energy of the sun. She looked at his arm. Her lips were trembling; her face was white.

"So you can do it, Lanny."

For a moment he had forgotten her remarkable inability. "You mean the healing? All men do that; we always have. A rational mind controls the structure and energy of organized matter."

"I've listened to Dr. Endhart teaching that to the small children," she replied. "It—it is difficult to believe." She began to laugh again; waves of hysteria swept her body. "I'm sorry, Lanny. I've thought, sometimes, that I'm losing my mind. We're never really certain of ourselves, are we? Two plus two doesn't have to make four, I suppose; it's just more convenient when it does."

"I could show you how to heal yourself, Tak Laleen."

"Ever since I came here I've been learning, Lanny. But it does no good unless I'm willing to learn first. My mind is tied down by everything I already know. I can put my two and two together as often as I like, and I still come up with four. Any other answer is insanity."

Twice, as they walked through the streets, Pendillo took a turn which led toward one of the enemy chapels. Lanny swiftly guided the missionary in another direction. The third time they came upon the Chapel of the Triangle suddenly, and before he could pull Tak Laleen back she broke free and fled toward the glowing Triangle, crying for help in her native tongue.

Lanny sprinted after her. Tak Laleen beat with her fists on the metal door. From the air above them came the high whine of a materializing force-field. Capsules swung down upon them. The missionary was swallowed within the church. Lanny and his father were enveloped in a single bubble.

It rose on an automatic beam and arched toward the skyport. In panic Lanny glanced down through the opalescent field at the settlement rolling by beneath them, and the choppy water of the bay, turned scarlet by the setting sun. Pendillo leaned calmly against the curved wall of their prison.

"She betrayed us!" Lanny cried.

"I expected her to, my son."

"You—you knew this would happen?"

"A teacher must sometimes contrive a unique—and possibly painful—learning situation. It's one of the risks of our profession."

"Why, father? She'll tell the Almost-men about the attack on the skyport; she'll tell them—"

Pendillo tapped the curved wall of force. "We're in a tight spot, Lanny. It's up to you to get us out —without a gun and without any of the enemy machines. All you have to work with are your brains and

what we've taught you for the past twenty years. I think you can count on some help from Gill later on. He'll have to attack the skyport tonight, without working out all his fine plans for seizing the arsenal. And Gill won't have any guns, either."

"So you and Endhart planned this."

"That's why I insisted on keeping Tak Laleen alive. I thought we might need her as—as a catalyst. The vote of the resistance council rushed things a little, but on the whole I think it worked out quite satisfactorily. Your education is finished, Lanny—for all of you who are the new breed. Now start applying what we think you know."

FOR A BRIEF time the prison sphere that held Lanny and Juan Pendillo was suspended above the teeming tiers of skyport streets. Enough time, Lanny guessed, for the enemy to question Tak Laleen and to reach some decision based upon what she had to tell them. Abruptly the capsule was hauled down. Lanny and his father were dumped into barred cells buried somewhere in the bowels of the city.

"What will they do with us?" Lanny asked.

From the adjoining cell his father answered placidly, "It depends on Tak Laleen's statement—and how much of it they believe."

"Will they condemn us to readjustment?"

"Undoubtedly, unless you solve our problem first—and these bars seem thoroughly solid to me."

Lanny drew in his breath sharply, suddenly afraid. "What's it like, father—the readjustment?"

"No one knows, really. A machine tears your mind apart and puts it together again—differently."

Lanny shivered as he remembered the half-dozen readjustment cases he had seen in the Santa Barbara treaty area—living shells, with all initiative and individuality drained from their souls. He moved to the barred door of his cell. For a split-second of panic he seized the bars and futilely tried to pry them apart. Slowly edging into his consciousness came a vague awareness of the structural pattern of the energy units in the metal. It was the same extension of his integrated community of cells which he had with his hunting club. His panic vanished; he felt a little ashamed because he had been afraid. It would be no problem to escape.

He held the bars and allowed his mind to feel through the pattern of energy organization. The metal was very different from any of the familiar substances Lanny knew, but far less complex because the arrangement was so rigidly disciplined. There were two things that Lanny might do. He could fit the energy units of his own body past the space intervals of the metal—in effect, passing through the metal barrier. But that would be slow and exacting work. It would require a considerable concentration to move the specialized cells of his body across the metal maze. The second method was easier. As he extended his cerebral integration into the metal, he could rearrange the energy unit pattern. The bars should fragment and fall apart.

Lanny was amazed how rapidly the change took place. Before he could adjust the pattern of more than half a dozen energy units, a chain reaction began. Lanny found he had to absorb an enormous flow of superfluous energy to prevent an explosion.

As soon as he crossed into the corridor, watching photo-electric cells sent an alarm pulsing into the guard room on the tier above. The metal-walled corridor throbbed with the deafening cry of a siren.

Lanny darted toward his father's cell. "Hold the metal and make it over with your mind—just as we integrate with our clubs. It's the same principal, father."

Pendillo shrugged. "I can't, Lanny. I don't know how."

Lanny had no time to weigh the significance of what his father said for the scream of the siren stopped and a guard appeared at the head of the corridor. The guard wrapped himself hastily in the shell of a force-field capsule. He fired his energy gun. The knife of flame arched through the corridor and struck Lanny's face. His body reacted instinctively, absorbing and

storing part of the charge and reconstructing the rest so that it became a harmless combination of inert gasses.

But as the blinding flame splashed bright in Lanny's eyes—the way it had once before, when he murdered old Barlow—Lanny's mind faced the traumatic shock of remembering. Lanny had murdered Barlow—he knew that, now—murdered him with a blaze of energy which he had stored when he brushed against the force-field capsule surrounding Tak Laleen.

It was not the fact of murder that had clamped the straitjacket of forgetfulness on Lanny's mind and allowed him to think Tak Laleen had killed Barlow. He had known, for one split-second, the full maturity of the education Pendillo had given his sons. Known it too soon, with too little preparation. Now he understood why he had felt ashamed, why he'd retreated deliberately from the truth: because he had killed Barlow to resolve an old argument, not to be rid of a traitor. The method of murder had, ironically, given him the answer to Barlow's poison of despair; but because the two had happened simultaneously, the emotional shock of one had affected the other.

The bursting charge of energy washed away his absurdly exaggerated sense of guilt. He achieved the mature integration he had lost before; his mind was whole again. The integration was nothing new—merely a restatement of what Pendillo had taught him, what all the treaty area teachers taught the new children. The mind of man could control the energy structure of matter. Pendillo called that rationality. But matter and energy were synonymous. The teachers had implied that without teaching it directly. A mind that could heal a body wound was also able to control the energy blast from an enemy gun.

From his father's cell Lanny heard a stifled groan. He looked back. The bars of the cell had been twisted by the blast; Pendillo was badly hurt. His wounds seemed to be extensive, but Lanny was sure his father would heal himself quickly.

Lanny sprang at the guard. The Almost-man had enough courage to hold his ground, still sure of his impregnable machines. He was aiming his energy gun again when Lanny touched the opalescent capsule. That, too, was nothing now; Lanny had found his way into the new world. The field of force was simply energy in another form. Lanny could have reshaped the field, intensified it, or dissolved it as he chose.

He shattered the capsule, like a bubble of glass. He smashed the gun aside. The guard stood before him, stripped of his mechanical armor—a man, facing his enemy as a man.

As the guard turned to run, Lanny reached out for him leisurely. Weakly the guard swung his fist at Lanny's face. Lanny laughed and slapped at the ineffectual, white hand. The guard howled and clutched the broken fingers against his mouth. Desperately he kicked at Lanny with his metal-soled boots.

Lanny dodged. The unexpected momentum sent the guard reeling and he had no efficient capsule to hold him up.

He sprawled on the metal floor close to his energy gun. He grasped for the weapon as Lanny leaped toward him. For one brief moment Lanny saw madness film his enemy's eyes. Then the guard began to scream. He thrust the muzzle of the energy gun against his own chest and pressed the firing stud.

Lanny turned away from the smoldering heap of charred flesh and went back to his father's cell. He disorganized the energy units of the tormented knot of metal bars and knelt beside Pendillo. Lanny was amazed that his father had made no effort to heal his wounds. Juan was bleeding profusely; his eyes were glazed with pain. Lanny lifted Pendillo tenderly in his arms.

"Father! You must begin the healing—"

"I do not know how, Lanny."

"All men control their own body cells!"

"So you were taught, and what a man believes is true—for him."

Cautiously Lanny extended his energy integration into his father's body. It was something he had never done before with a living man. The weak disorganization of cells frightened him. Clearly Pendillo was telling the truth; he was incapable of ordering his own healing. Then how had he taught his sons so well, if he could not use the technique himself?

Hesitantly Lanny released into his father's body some of the energy he had stored. He wasn't sure what the effect would be, but it seemed to help. Pendillo tried to smile; his eyes became clearer.

"Thanks, Lanny. But you can't save me, my son. I've lost too much blood; I have too many internal injuries."

"But you could do it for yourself, Father." Lanny shook his head. "I don't understand why—"

"You wouldn't, Lanny. You're the new breed."

"You say that so often."

"In my time that might have meant a new species—supermen we created by genetics in a biological laboratory. But we've done more than that. You aren't freaks; you're our children in every sense of the word. We have made you men; we've taught you how to think."

"You deliberately made us as we are?"

"Every man who lived before your time was an Almost-man, Lanny. He had your same potential, but he hadn't learned how to use it."

"How are we different?"

Pendillo was seized with a sudden spasm of coughing; blood trickled from his lips. Once again Lanny released a shock wave of energy into his father's body, and Pendillo's strength was partially restored.

"I will tell you as much as I can," Pendillo promised, but his voice was no longer as clear as it had been. "I don't have much time left. The idea for our new breed of men began at the time of the invasion. Lanny, there wasn't much to choose from between our people and the enemy. Our cities were like theirs;

we were enslaved by machines—by the technological bric-a-brac of our culture—as they are. Only our science was different. We had exploited the energy of coal and oil and water-power; we were beginning to accumulate a good deal of data about the basic atomic structure of matter.

"But we would have ridiculed any serious consideration of degravitation, or the magnetic energy of a field of force. These were the trappings of our escapist fiction, not of genuine science. We had a more or less closed field allowed to legitimate scientific research; any data beyond it was vigorously ignored.

"Then, from nowhere, we were invaded and utterly defeated by an alien people who used the precise laws of science we had scorned. Furthermore, we saw them ridicule our principles as semi-religious rituals of a savage culture. In the invasion less than a tenth of mankind survived. We were herded into the treaty areas, with no government and no real leadership. Some of us had been teachers before the war; the survivors looked to us to preserve the spirit and the ideals of man.

"We had to make a selective choice, Lanny. We had no books, no written records, no way to preserve the whole of the past. The teachers in all the treaty areas quickly established contact by courier. The lesson of the invasion had taught us a great deal. Men had been imprisoned by one scientific dogma, which had produced a mechanized and neurotic world. The Almost-men were trapped by another that had produced the same end result.

"So we had our first objective: to teach our children the supreme dignity, the magnificent godliness, of the rational mind. We didn't tell you what to think—which had been our mistake in the past—but simply the vital necessity of rational thought. We taught you that the mind was the integrating factor in the universe; everything else was chaos, without objectivity or direction, until it was controlled by mind. After that, we jammed your brains with data from every field of knowledge that had ever been explored by man. That's why we interchanged couriers so frequently. In our world we had been specialists; we had to share the facts among ourselves so the new breed might have them all."

Far away they heard the dull thunder of an explosion. Lanny's head jerked up. Pendillo coughed up blood again, but there was a satisfied smile on his lips. "That will be Gill and the boys from the treaty area," he sighed. "Arriving right on schedule. We've forced them to attack the city without weapons; to survive, they'll have to make the same mental reintegration that you did, Lanny."

"How could you have been so sure, father, that we would be able to—to handle the matter-energy units the way we do?"

"We weren't, my son. We were sure of nothing. We only knew that you were the first generation whose minds had been set completely free. Nobody had done any of your

thinking for you. If any man is equipped to solve problems, you are —you of the new breed."

"But why couldn't you learn the same techniques yourselves? Why can't you save yourself now, father?"

"Because we belong in the old world. Because the technique is only an application of the data you know, Lanny; that is something you have worked out for yourselves. We could give you the theory; we were incapable of following it through your minds."

Pendillo gasped painfully for breath. He closed his hand over his son's. "The old survivors are still imprisoned by beliefs carried over from the world we lost. We teach, Lanny, but we cannot believe as you do, even when we see our own children—our own sons—" His voice trailed away, and he slumped against Lanny's chest.

A series of explosions rocked the metal walls; Pendillo opened his eyes again. His dying whisper was so soft, so twisted by pain, the words were almost inaudible. "One more thing, son. We did more—more than we thought. Don't retreat to our world; make your own. Without the machines and the city walls and the uproar—"

Juan Pendillo grasped his son's hand. His fingers quivered for a moment of agony. And then he died.

LANNY STUMBLED away from the cell, his eyes dim with tears. The repetitive explosions continued outside in the domed city. Lanny discovered the origin of the sound when he made his way up the incline to the upper level. The parade of gigantic freight spheres was swinging in from the void of night, but the port machines, which handled the landings, were idle. The spheres were crashing, one upon the other, into the field just beyond the city. From disengaged, pliable tubes, jerking with the spasmodic torment of mechanical chaos, the raw materials plundered from the earth poured out upon the ruin. Fire licked at the wreckage, probing hungrily toward the city of the Almost-men.

Lanny ran through the deserted guard rooms. Beyond the walls he heard a babble of panic on the city streets. The first exit that he found led up to the second level, where no man had ever been.

He emerged on an ornate balcony, which overlooked the square where the trading booths stood. The force dome that had sheltered the city was gone. Lanny could look up and see the stars—and the endless parade of glowing freight spheres descending toward the earth. The air was clean, cold and wet with the sea mist.

In a sense the depressing, stifling city he had seen that afternoon was already gone—except for the bleak walls and the clatter of machine sounds. And, in the agony of its death, the city noise had become the scream of mechanized madness. A seething mass of vehicles choked every tier, fighting for space, grinding each other into rubble. Vehicles careened from the upper roads and plunged into the mass beneath.

At first it seemed a panic of machines. The people were trivial incidentals—bits of fluff which had been unfortunate enough to get in the way of the turning wheels. Then Lanny saw the walkaways, as crowded as the roads. A mass of humanity spewed through the doors of the luxury hotels, like run-off streams swelling the floodtide of a swollen river. Where were the Almost-men going? How could they escape? They had given their will and initiative to their machines; they could do nothing to help themselves.

Lanny saw an occasional opalescent bubble rise in the air. But inevitably, before it could move beyond the city, a force of blazing energy shot up from the lowest tier and brought the capsule down. Here and there in the darkness Lanny saw the furious blast of an energy gun, probing futilely into the chaos.

As the fire rose higher in the port wreckage, Lanny saw men fighting on the lower tier. They held the bridge and the trading square and they had taken the power center, which explained why the city was dark and why the force dome was gone. But they were still fighting to take the arsenal. A squad of guards held them off with energy guns; the men fought back from the darkness with weapons they had captured elsewhere.

Even now they hadn't discovered the truth; they still feared the enemy weapons. They still thought they must have guns of their own—machines of their own—in order to be free. Build your own world, Pendillo had said; don't go back to ours.

Lanny pushed through the throng on the walkway, trying to find an incline to the lower tier. Once or twice people in the mob saw him, in the shuddering light reflected by the energy guns, and recognized him as a man—a half-naked, black-bearded savage. They screamed in terror.

This was the hour of man's revenge, yet Lanny felt an inexpressible shame and sadness. Was this the way man's cities had died a generation ago, in a discord of mechanical sound, without courage and without dignity?

At last he found the incline to the lower level. It was jammed with a mass of Almost-men, fighting and clawing their way down so they might flee into the hunting preserve beyond the city. The tide swept Lanny with it. At the foot of the incline he circled the arsenal to join the men, still confined in the trading square.

Gill was directing the fire of his men as they inched forward. He clapped Lanny on the back, grinning broadly.

"I knew you'd get out, Lan. Is Juan all right?"

"He's dead, Gill. He was wounded and he didn't know how to heal himself."

"He had to know, Lanny; he taught us."

"They all taught us. They made us—" Lanny's voice choked a little as he used his father's familiar phrase. "—a new breed. Gill, we're acting like fools; we're fighting for

something we don't want or need."

"We have to have weapons, Lan."

"We need nothing but what we've been taught. The mind interprets and commands the chaos of the universe. Matter and energy are identical."

Lanny turned and walked, erect and unafraid, toward the arsenal. The energy fire from the guards' guns struck him and exploded. He reorganized the pattern into harmless components and stood waiting for the charge to die away.

In a moment Gill was beside him, beaming with understanding as he met and transformed a second blast from the guns. "Of course matter and energy are the same!" he cried. "It should have been obvious to us. We have been prisoners twenty years for nothing."

"We needed those twenty years to discover our new world. We have only finished our education tonight."

As a third blast of energy came from the arsenal, other men slid out of the darkness and faced the guns. Lanny and Gill walked away, ignoring the screaming machines and the stabbing knives of fire.

"Yesterday," Gill said slowly, "if I had known that I could direct a flow of energy just as easily as I integrate with my hunting club, I would have stood here cheerfully and slaughtered the Almost-men, just to watch them die. Now, I'm sorry for them."

"There's no reason why they must all die in panic, Gill. Isn't there some way—"

Behind them they heard a burst of ragged cheering. The arsenal guards, having seen their weapons fail, had deserted their posts and fled. Men stormed into the building, shattering the metal doors by reorganizing the energy structure. Slowly they wheeled out the great machines—the symbols of enemy power.

"We fought for this," one of the men said. "And now we have no use for them."

Gill called a meeting of the resistance council in the deserted trading square, while the city around them throbbed in the chaos of disintegration. The men were entirely aware of the problem created by their liberation. The new breed was free, on the threshhold of a new and unexplored world. They could carry the message to other treaty areas; they could show other men the final lesson in reorientation. That much was simple. But what became of the enemy?

"It would be absurd to kill them all," Gill said. He added with unconscious irony, "After all, they do know how to think on their own restricted level. They might be able, someday, to learn how to become civilized men."

"The worst of it," one of the others pointed out, "is that their home world is bound to know something's wrong. The delivery of resources has already been interrupted. They will try to reconquer us. It doesn't matter, particularly, but it might become a little tiresome after a while."

"Ever since I understood how this would end," Lanny said, "I've

been wondering if we couldn't work out some way for them to keep the skyports just as they are. Let the Almost-men have our resources. They need them; we don't."

The council agreed to this with no debate. Lanny was delegated to find someone in authority in the skyport and offer him such a treaty. Lanny asked Gill to go with him. The others split into two groups, one to put out the fires and clear away the port wreckage; the second to herd the enemy refugees together in the game preserve and protect them from the animals.

Lanny and Gill pushed through the mob toward the upper levels of the city. The crowd had thinned considerably as more and more of the enemy fled into the forest. The brothers, barefoot giants, had an entirely unconscious arrogance in their stride. They passed the rows of luxury hotels and entered the government building. Here, apparently, there was an emergency source of power, for the corridor tubes glowed dimly with a sick, blue light. Room after room the brothers entered; they found no one—nothing but the disorderly debris of haste and panic.

Methodically they worked their way to the top floor of the building. In a wing beyond the courtroom were the private quarters of the planetary governor.

He sat waiting for them in his glass-paneled office overlooking the tiers of the city. He was a tall man, slightly stooped by age. He had put on the full, formal uniform of his office—a green plastic, ornamented with a scarlet filagree and a chest stripe of jeweled medals. He was behind his desk with the wall behind him open upon the sky.

"I expected a stampeding herd," he said.

"You knew we were coming?" Lanny asked.

"It was obvious you'd try to force us to sign a new treaty."

"Call it a working agreement," Gill suggested. "We intend to let you keep the—"

"You have panicked the city by taking advantage of our kindness. But you won't pull this stunt again; I've already requested a stronger occupation force from parliament."

The governor stood up; he held an energy gun in his hand. "This frightens you, doesn't it? You should have expected one of us to keep a level head. I've handled savages before. You're very clever in creating believable illusions, particularly when there seems to be some religious significance. I should have known it was a trick when you sent that addle-witted missionary back to us."

"Tak Laleen?"

"Of course none of my men tell me what's going on until it's too late. They took her to the Triangle first. She talked to the priests, and they filled the city with all sorts of weird rumors about men who could control the energy pattern of matter." The governor's lip curled; he nodded toward a side door. "She's here now, under house arrest. She'll be expelled from the territory on the first ship out after the port is reopened."

"She's wasn't lying," Lanny said.

"She understood more than we did ourselves. Maybe Juan told her—"

The governor laughed and motioned with his gun. "Will you join her, or do you want to force me to spoil your pretty illusion?"

Gill walked unhurriedly toward the desk. "You must listen to us. Fire the gun, if you insist on that much proof. We want to save your world, not destroy it."

The governor backed toward the open wall panel. "Stand where you are, or I'll fire!"

"Just give us a chance to explain—"

"The whole business is drivel. Superstitious nonsense. No man can violate the established laws of science."

"Why not, since men made the laws originally?"

The shell of dignity in the governor's manner began to crack away, revealing the naked hysteria that lay beneath. Gill moved again. The governor punched the firing stud of his energy gun. The fire lashed harmlessly at Gill's chest.

"It's a lie!" the governor screamed. He fired the gun again at Lanny; then at Gill. His mouth quivered with terror. He was an intelligent man; he looked upon the evidence of a fact that overturned everything he believed. In the clamor of a dying city, still throbbing far below his open wall panel, he heard the testimony of the same discord. He lost his rational world in the chaos, and he hadn't the ability to find another.

For a moment the governor stood looking at the half-naked giants he had been unable to kill. Then he flung the weapon away and leaped through the open panel into the mechanical clatter of the dying city.

"Once I wouldn't have cared," Gill told his brother. "Now I do. Lanny, must we destroy their world in spite of ourselves?"

They heard a faint voice behind them. "Not all of us, Gill." The brothers turned. They saw Tak Laleen, dressed again in the white uniform of the missionary. She came slowly through the metal panel of a door.

"You see, it is possible for us to learn," she said when she stood within the room. "I have."

"Then all your people—"

"Not all of them. A few, if they're fortunate."

"You did it, Tak Laleen; most of our older survivors haven't."

"They watched you grow up. The change was so gradual, they weren't aware of it. I fell into your hands at the moment when you were yourselves discovering your potential capabilities. I followed the three of you when you ran away from the sphere police in Santa Barbara. One of you had touched my force-field capsule and drained away its power. I had to know how you did it. By intuition I guessed something very close to the truth, but even so it could have unhinged my mind if it hadn't been for Juan Pendillo. He taught me what he had taught you—a new point of view, a new way of looking at the world. He was so gentle and so patient, so easy to understand."

"And after all that, you ran away from the skyport and betrayed him."

"It was a put up job." She smiled. "Juan and I worked it out together. He wanted to force the city guards to attack the treaty area; but, if my people refused to believe what I told them, at least Gill would try to rescue his father and Lanny. We had to make the conflict begin before you were armed. If you won by using a machine, you might put your faith in machines again instead of yourselves. It was a risk for Juan and myself, but more so for you. No one really knew what you might be able to do, or what your ultimate limitations were."

"There are none," Gill said.

"I know that now, because I've made the reorientation myself. I didn't then. The rational mind is the only integrating factor in the chaos of the universe—Juan told me that. It is literally true. Mind creates the universe by interpreting it." She put her hand in Lanny's and looked up at the stars patterning the void of night. "I wish I might say that to my people and have them understand; but the clatter of our machines closes us in. Our world will die in violence and madness, the way the skyport died tonight. We may be able to help the survivors afterward; we can do nothing now."

"But we must do it now," Lanny persisted stubbornly. "We don't want revenge, Tak Laleen; we've outgrown our reason for that."

"Can you teach my people any differently than you learned yourself? It took an invasion and twenty years of imprisonment before you were able to break free from your old patterns of thinking."

"But you did it in a day."

"In the beginning, your teachers didn't know what their goal was; they only knew they had a problem and it had to be solved. I came in at the end, when their job was nearly finished and they were pretty sure where they were headed. That's why it was so easy for me."

"And your world does that, too."

Gill fingered his lip. "The trouble is, Lanny, it isn't simply a matter of giving them the facts. To us they are obvious, but you saw what happened to the governor. How can we make a man believe a new truth, when it means giving up all the science he has always believed?"

"We failed with the governor because we threw the end result in his face without giving him a logical reason to accept it."

Tak Laleen shook her head. "And so we're back where we started. We have to let my world fall apart before we can save it." She moved impatiently toward the door. "This building is a tomb. I want to walk on the soil and smell the wind and taste the energy of the earth."

In an uncomfortable silence they left the government building. Gill integrated with the power in the lift, and they rode the elevator to the ground level. As the cage slid past the empty floors, Gill broke the silence abruptly.

"If all we want is to prevent chaos on your world, Tak Laleen, it won't be hard. We'll just go through with the treaty we intended to offer to the governor. We can

put things back as they were and go on delivering resources to the Almost-men. The only people who know the truth will be our prisoners. We can keep them out of sight and ourselves play at being Almost-men to satisfy any tourists who come to the skyport."

"We'll have to do that for a while, until we work out something better; but it's only a stopgap. We have a problem," Lanny said doggedly. "We know it can be solved, because it has been for ourselves and for Tak Laleen. All we have to find is the method."

"Learning begins with a need," the missionary said. "For you, it was twenty years of despair: invasion, humiliation, surrender. Your old ideas didn't work. You either had to accept status as second-raters or work out a new way of thinking. As for me—" She shrugged her shoulders. "I suppose I couldn't help myself. I did try to run away, remember. I tried every possible answer in terms of our logic first. I even thought, for a while, that Lanny was a robot. Anything but the truth."

Gill asked, "When did you first begin to understand? What happened that made you willing to believe the truth?"

"It was an accumulation of many things, I suppose."

"That isn't specific enough. There must have been one instant when you were willing to give up what you believed and start learning something new."

"I don't know when it was."

They left the government building and walked through the lower courtyards of the city. Groups of Almost-men were being herded back into the city from the game preserve. They clung together, hushed and terrified. The city lights were in working order once more and the flashing colors turned their faces into gargoyle masks. Three guards, in torn and bloodstained uniforms, stood looking at the machines which men had hauled out of the arsenal. Suddenly one of the soldiers began to kick at an abandoned gun, screaming in fury while tears of rage welled from his eyes.

Lanny turned away. It was painfully embarrassing to watch the dissolution of a human personality, even on the relatively immature level which the machine culture of the Almost-men had achieved. But as Tak Laleen watched the spectacle of childish rage, sudden hope blazed in her eyes. She grasped Lanny's arm.

"He's blaming the machine for our defeat," she said. "Now I remember what happened to me; now I know! When you were running away from Santa Maria, Lanny, you fired an energy gun at my sphere. It destroyed the forcefield and I fell out of the port. I was terrified—not so much of you, but because my machine had failed. All night while I lay in the launch, I faced that awful nightmare. For the first time in my life, I began to doubt the system I had trusted. I lost faith in my own world. I felt a need for something else."

Lanny repeated slowly, "Loss of faith in the status quo—"

"Could we duplicate that for all your people, Tak Laleen?" Gill

asked doubtfully.

"Yes, I'm sure we could, Gill. We have a clue; we know what has to be done. And we have an experimental laboratory." The missionary nodded toward the mob of cringing Almost-men coming in from the preserve. "We have a city of people, disorganized by panic, with their faith in the machine already shattered. While we teach these people how to make the reorientation, we'll learn the methods that will work most effectively with my world."

They left the city and began to cross the bridge toward the treaty area. Tak Laleen passed her arms through theirs. She said, with sorrow in her voice, "No matter what we do, no matter how carefully we try to cushion the panic, we still have no way of being entirely sure of the results. Something that works with our prisoners or with us might destroy my world; it could send a planet into mass paranoia."

"That risk is implied in all learning, Tak Laleen," Lanny answered. "We can never escape it. I'm not sure we ought to try. The individual who lives in a closed world of absolutes—shut in by prison walls of his own mind—is already insane. The sudden development of a new idea simply makes the condition apparent."

"In a sense," Gill added, "there is no such thing as a teacher. There are people who expose us to data and try to demonstrate some techniques we can use, but any learning that goes on must come from within ourselves."

"We will develop the most effective method we can," Lanny said. "Then we will apply it to your world, Tak Laleen. The rest is up to them. That's as it should be—as it must be."

Arm in arm they crossed the bridge—two men and a missionary from an alien world. They had been enemies, but during a night of chaos and death they had learned to become men—the first men to catch the vision of the new world of the mind. Each of them was soberly aware that the discovery was not an end, but a beginning. And they faced that beginning with neither fear nor regret, because they had the confidence that comes of maturity. The unknown was not a god-power or a devil-power, but a problem to be solved by the skill of a rational mind. • • •

Only an expert in the vast literature of science can tell whether an alleged discovery is new, only critical repetition can establish its truth, and time alone can measure its worth. —*Ernest Borek*

Doing a thing . . . is very different from knowing how and why you do it. Only as we learn the reasons why, does real progress begin; and for these reasons we must look to science as developed by research. —*Dr. Arthur Dehon Little*

Beautiful Karen, who had fled the shackles of Earth, once had written: "We shall never leave Earth as long as we compute escape velocity in miles per hour . . ."

PRISONERS OF EARTH

BY ROBERT F. YOUNG

Guildenstern: Prison, my lord?

Hamlet: Denmark's a prison.

Rosencrantz: Then is the world one.

Hamlet: A goodly one, in which there are many confines, wards, and dungeons, Denmark being one o' the worst.

Rosencrantz: We think not so, my lord.

Hamlet: Why, then, 't is none to you; for there is nothing either good or bad, but thinking makes it so. To me it is a prison.

(HAMLET: Act II, Scene 2)

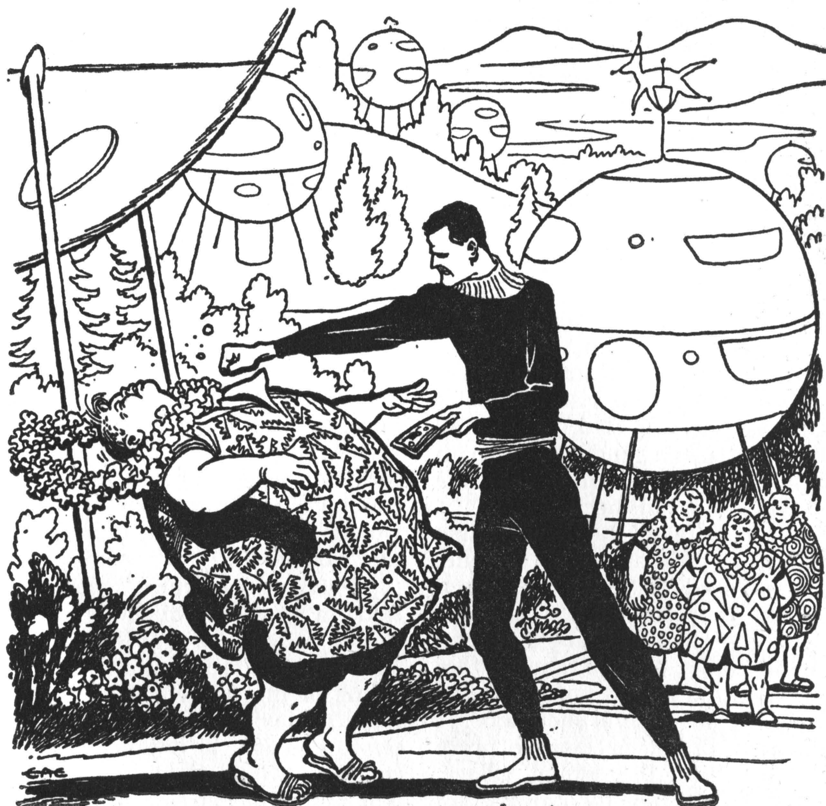
IT WAS a country of blue lakes—the *Misseros d'n Gaedo* region of Altair 12. There were little lakes and big lakes and middle-sized lakes scattered like sapphire dewdrops over a tableland verdant with forest. Some of the lakes had small green islands in them and it was on one of these islands that Larry saw the second native village.

He brought the little flier down, circling several times before he deposited it gently on the water. Then he retracted the swallow-wings and started taxiing toward the shore. He had a feeling that this, surely, was the right place.

It had the right look—the odd, pathetic aspect all the other places had had in one way or another.

The pink, spherical houses, perched absurdly on gangling stilts, came right down to the water's edge, and the village street debouched on the beach. If you could call the meandering aisle between

Illustrated by Ed Emsh



the houses a street. In any event it sufficed for one, and it was filled now with the people of the village.

They came down to the lake to greet him. The quaint people, the grown-up little boy and girl people who, in the premeditated phraseology of the Altair travelogue, "played at being adults in their simple paradise of fish and fruits and little isosceles triangles of vegetable gardens."

Larry eased the flier between two cluttered fishing rafts, running its prow into the soft beach sand. He locked the controls and climbed out. The village chief walked down to the water's edge to receive him.

"Welcome to my country," the chief said in standard *Galactia.* He bowed ceremoniously. In the eyes of his people he was far from young, but in Larry's eyes he was a little boy with a fat man's body. He had a large cherubic face—a small pink mouth, chubby beardless cheeks, and enormous blue eyes. His hair was light brown, and there was a startling cowlick protruding over his forehead like the visor of a baseball cap. He was clad, as were all his subjects, in a gaudy thigh-length skirt, and he wore a fresh lei of *iliao* flowers around his neck.

Larry imitated the bow, feeling ludicrous. "Thank you," he said. He surveyed the crowded street, looking over the chief's shoulder. But all he saw were baby faces and rotund bodies, and no familiar face with delicate features and haunted blue eyes, no graceful shoulders . . . But that didn't necessarily prove that this was the wrong village. Karen didn't care for crowds, not even crowds that gathered to welcome her own husband. If he knew her at all she had probably fled into the forest the moment she had seen the approaching flier and now was sitting by some quiet stream, composing introvert verse. . . .

The chief had begun his well-rehearsed welcome speech. "—for the duration of your visit," he was saying, "let my country be your country. Let my subjects be your subjects, and I, the chief, shall be your subject also—"

The traditional snowjob, Larry thought. To how many hungry-eyed tourists had he already delivered it? Tourists with blue lakes in their eyes and with little office cubicles crammed into the backs of their minds. If I were a tourist I'll bet it would sound terrific to me, too, he thought. I'll bet when he came to the part about the rent it wouldn't even disillusion me, that even then I'd be too blind to see the credit signs in his baby-blue eyes.

But tourists didn't mind being duped. They came to the *Misseros d'n Gaedo* region to fish and to hunt, to relax in an uncomplicated milieu; they didn't come to look for their wives. They'd had sense enough to marry emotionally stable women. Stolid women, unimaginative women—

"There is, of course," the chief said, "a small fee which we are required to ask for our hospitality. Probably you are familiar with the ruling of the Altair council in this respect. Having to ask payment for services which, in happier circumstances, I would gladly render free, is a source of extreme humiliation

to me, but I have no choice."

Larry already had his credit book in his hand. "I don't know exactly how long I'll be here," he said. "Perhaps a week—"

The chief's blue eyes were guileless. "Our weekly rate is fifty credits," he said. "Payable in advance."

The robber! Larry thought, tearing out five crisp tens. The first village had only asked thirty-five, and that had been exorbitant enough. He hadn't had to pay then, though. One glance around had told him Karen wasn't there. Somehow, after years of weary searching and finding, you knew instinctively where to look; you sensed just the kind of *mise en scène* that would appeal to her. You could tell by the expressions on the people's faces, by the architecture of the houses, by the contour of the land. One glance had been enough and he had reentered the flier and lifted swiftly above the disappointed natives, and presently he had found this village. And this village *looked* right, this village *could* be the one—

And if it was, fifty credits was certainly cheap enough, he rationalized. Finding Karen was worth more than fifty credits any day. He handed the five tens to the chief and returned to the flier for his kit. By the time he returned to the beach the chief had already selected a "companion" for him and was walking back up the village street. The crowd, its duty done, was listlessly dispersing.

Larry's "companion" was a buxom doll of a girl with a rosebud mouth, big blue eyes, and frizzly straw-colored hair. She took his kit and led the way up the street. There was a shed-like structure that resembled a primitive warehouse standing on the beach. But Larry knew it wasn't a warehouse, and when they passed it he identified the muffled sound that emanated from its interior as the smooth hum of a modern generator. He identified the vine-like cables that overhung the street for what they really were too—electric wires.

Multi-colored honeysuckle wound riotously around the stilts of the houses, but looking closely he saw the glint, here and there, of a copper pipe, and he knew that primitive though the houses might be in outward respects they at least had running water and other modern conveniences.

They also contained some form of television receivers. The animal shapes of the antennae on their rooftops might convince the ordinary tourist that all he was seeing was a kind of cultural religious symbol, but Larry wasn't an ordinary tourist. He wondered cynically what ancient vintage of film entertainment the Interstellar Mass Media Board had alloted Altair 12. Then he saw a group of native children playing in the nearby forest and he realized the nature of the game they were engaged in. The hoary "bang-bang" of the pre-space "oaters" resounded incongruously among the idyllic trees as baby faced cowboys loped ecstatically about on imaginary steeds. Hopalong Cassidy rides again, Larry thought, and marveled at his own apostasy.

The trouble with him was that he had seen too many converted cultures. Searching for Karen on so many out-of-the-way planets had made him hypercritical, in spite of himself, of the repetitious puppet dances of inferior civilizations. And when the dance was deliberately concealed behind simple, non-technological exteriors in order to lure vacationists from Earth and the other technologically advanced planets, there was something snide about it, something obscene. . . .

His "companion" had halted before one of the houses and was regarding him with mundane baby-blue eyes. He concluded that it was the one the chief had assigned him. It was no different from the other houses except that it really was what it purported to be: there were no water pipes hidden in its honeysuckle and the metallic animal design on its rooftop was just that.

"You is mayhap tired?" the girl asked in pidgin *Galactia*.

Larry was more than tired. He was exhausted. It had been more than twenty standard hours since he had left the Altair 12 consulate. But he shook his head. He took his kit from the girl, climbed high enough on the climbing pole so that he could shove it through the door, then returned to the street. He pulled his credit book from his pocket and riffled its crisp pages.

"Am looking for Earth lady, beautiful Earth lady," he said. "You have mayhap seen?"

The blue eyes were mesmerized by the green blur of the pages. "Beautiful Earth lady? How is lady look?"

"Lady very very beautiful." He had trouble keeping his voice steady. "Have hair like sun, eyes like sky. Like to walk in woods. Very much like to walk in woods—"

He paused. The big blue eyes had risen from the credit book. They were filled with wonderment first, and then disbelief. Finally the disbelief faded and amusement took its place. A grimy hand covered the rosebud mouth, stifling a giggle.

Larry felt like slapping her. He controlled himself with an effort and riffled the credit book again. "You have seen lady?"

"Have seen many times. Crazy lady. Walk in woods, look at flowers, birds. Make funny marks in wrong color credit book."

Larry sighed. It was the right place all right. There hadn't really been any doubt in his mind since the moment he had first glimpsed the village. "Where lady now?"

"Not know. Think mayhap live at Mission. Not see many days now."

"Where Mission?"

"Mission on big hill, center of island." Keeping one blue eye on the credit book, she pointed up the street to where the houses petered out into the forest. "Walk through woods, come to creek. Follow creek back."

Larry nodded. Then, reluctantly, he tore a five from the book and laid it on the outstretched hand that suddenly appeared before him. "Here," he said, "go buy yourself some electrical appliances."

He turned abruptly and started up the path that led through the woods to the Mission beyond.

IT WAS Karen's type of forest—charming little trees, sudden clearings filled with unexpected flowers, birds like winged blurs of color . . . Larry walked along slowly, bending his head sometimes to avoid the low branches of the trees. It was almost impossible not to picture her strolling dreamily through the enchanted aisles, curling up in some sequestered bower to jot down wisps of verse in the little notebook she always carried—

And such verse! Larry shook his head. He had never understood it and he never would. Not that he hadn't tried. But how could you understand outrageous outpourings like—

—the cold touch of doubt upon you
in the evening
and the falling to Earth of stars,
each burning infinitesimally in the
little night,
abruptly microcosmic,
its hauteur gone,
a pitiful cinder beneath the scuffed
shoes of man . . .

or—

we have converted the souls of
mountains into shining ships,
and yet we cannot leave Earth;
we shall never leave Earth
as long as we compute escape veloc-
ity in miles per hours . . .

Nonsense, Larry thought. Utter nonsense. Like all the rest of her poetry. And yet, illogically, an obscure publishing house had brought out a collection of her most aberrant verse under the title of *The Prisoners of Earth.* Nor had they stopped with one collection. A year later another had appeared. *Equations.*

Larry bent back an offending low branch until it snapped. *Equations!* The book had turned out to be even more esoteric than *The Prisoners of Earth* had been. At least *The Prisoners* had resembled poetry, even though not a single one of its lines had rhymed. *Equations* didn't resemble anything at all. "Mass Man" for instance—

$$\frac{\text{Homo Sapiens}}{\text{Technological Culture}} \text{ equals Mass Man}$$

and then there was the one on "Earth"—

Earth x 1,000,000 equals Earth

and the one on "Escape Velocity"—

Emotional Escape Velocity
Maturity)Technological Progress

The trees thinned out and he found himself on the green shoulder of a sparkling brook. He paused, staring down into the dancing water, the equations fading from his mind. There were always brooks in the milieus Karen chose when she ran away—brooks and trees and meadows, lakes and gentle hills. Suddenly he had the feeling that he was reenacting an old, old scene out of an old, old play. The name of the play was *Karen* and its basic plot was girl-leaves-boy, boy-looks-for-and-finds-girl.

They had performed the play in so many places, against so many

backgrounds . . . The first place had been the Tetkov reservation of Alpha Centauri 4, and the background had consisted of lazy rivers winding among tumbled hills and green traceries of trees in serpentine valleys. Karen had joined the Tetkov nomads in that performance, and Larry had found her, after weary, heart-breaking months, creditless and starving in a little Tetkov town.

He had taken her back to Earth, and after several months he began to think that one experience in "going native" had permanently cured her of her *Weltschmerz*. She was docile, and she smiled at the right times and laughed when she was supposed to, and she no longer made unintelligible remarks when galactic civilization was the topic of conversation. He even began to believe that she was going to be worth the five thousand credits he had paid her father for her after all.

And then she had run away and the play had begun all over again.

The background for that performance had been Heaven, the third moon of Sirius 9. Heaven was the twenty-third psalm minus the valley of the shadow of death. It was a place of green pastures and still waters. It was blue sky and gentle terrain and soft winds breathing out of the south from morning till night, and a big safe night that was only a shade less bright than day.

When he finally found her Karen was living on the reservation which the Earth Supreme Council had set aside for the natives. She was a shepherdess. She was wearing a shining white robe and hand-made native sandals, and she was holding a primitive shepherd's staff. She was the most beautiful thing he had ever seen, and when he saw her he wanted to cry.

And then he had seen the disillusionment in her eyes, the pain; and for the first time he had noticed the bleak steel ribs of the new Interstellar Trade Building rising in the distance—

The dancing water threw flecks of sunlight into his eyes and Larry turned away. He began walking along the green shoulder of the bank, the ground rising slowly beneath his feet. The grass was knee-deep and infiltrated with flowers; birds blurred from little tree to little tree.

He had made up his mind on Heaven that there weren't going to be any more performances, but there had been many many more. He thought of them grimly, and thought too of the interludes between when Karen had rationalized her brief periods of conventional behavior by writing her paradoxical poetry. And for the hundredth time he wondered why he bothered, why he didn't let her go, let her become whatever it was that she wanted to become, let her, in her own words—

—Break free from all the gaudy glittering things
that constitute the circumstance of man,
and become the essence of not-wanting . . .

The forest, typical of all Karen forests, ended abruptly, and a

Karen-type hill raised its lovely green brow into the blue sky. On top of the hill the white buildings of the Mission gleamed in the afternoon sunlight. Larry climbed the hill slowly, wading in the tall grass. When he reached the outlying buildings and saw the new-turned grave in the little burial lot he knew, without knowing why or how he knew, that the basic plot of the play *Karen* had finally varied, and that the curtain this time, had fallen irrevocably.

THE MISSION Mother came out of the chapel while Larry was standing by the grave. She walked over and stood beside him. She was old and thin, with faded eyes set deep beneath sharp dark brows. She wore the traditional golden cape about her shoulders, and the sacred U-235 Emblem, symbol of the Galactic Church, glittered on her forehead.

"She was your wife?" she asked.

"Yes," Larry said. There was a vast emptiness building up beyond the *Misseros d'n Gaedo* horizon, threatening to move in over the forests and the blue lakes.

"She mentioned you several times. She seemed to be expecting you."

"How did she die?"

"She could have stayed here, but she wouldn't." The Mission Mother sniffed. "She could have worked for her food and her lodging. But she was too lazy. All she wanted to do was wander in the forest, to dream—"

"Never mind all that," Larry said. "How did she die?"

"She died of starvation. She lived in the village when she first came. Then, when her credits were gone, she lived in the forest. Naturally the natives refused to feed her when she could no longer pay." The Mission Mother looked at Larry closely. "You certainly can't blame them for that, can you?"

"No, of course not," Larry said. The emptiness had begun to move in. He felt the first cold breath of it.

"She didn't even blame them herself. Just before she died I heard her say, 'Father forgive them—' I don't know why she asked her father to forgive them though."

Larry shook his head. He looked down at the grave again. There were fresh forest flowers covering it. "The flowers are beautiful," he said. He looked at the Mission Mother. "Did you put them there?"

Two raddled spots of red appeared on the Mission Mother's thin cheeks. The U-235 atom glittered harshly. "Yes . . . It isn't customary but—" She dropped her eyes, stared at the grave. "I don't know why she wouldn't stay at the Mission," she said. "She could have worked for her food. She wouldn't have had to work hard. I don't know why she wouldn't. I don't know why she was so fascinated by the forest—"

"Karen wasn't like us," Larry said. He looked over the Mission Mother's head at the metallic sphere of the chapel, at the big atom-emblem poised above it like the hard bright heart of a star. He wondered if Karen minded being buried in what she would have

called a heathen churchyard. She had never believed in the Galactic Church. She had belonged to some silly religious sect that dated from before the dark ages of Earth, a dying sect that worshipped an impossible God who advocated throwing away credits.

He decided that the religious aspect of the churchyard wasn't important. What was important was the green hill on which it stood, the matchless blue sky above it, and the forest and the lakes rolling away into the soft distances. Certainly, if Karen belonged anywhere at all, she belonged here . . .

The emptiness was very close now, and suddenly he knew that he couldn't face it. Not yet. He lowered his gaze to the Mission Mother. "Thank you for trying to help her," he said, and he was shocked to see that there were tears in her faded eyes. He turned away quickly and began walking down the hill.

He walked down the hill and into the forest, the emptiness just behind him. He walked through the forest rapidly, following the dancing brook till he glimpsed the pink spherical houses through the foliage. He stopped at the house that the chief had assigned him and retrieved his kit, and then he continued on down the village street, the emptiness close at his heels.

When he was halfway down the street the chief came running up behind him calling, "Wait! Wait!" Larry paused, and that was when the emptiness caught up to him.

The chief was breathing hard. His baby face was red and his cowlick protruded belligerently. He looked like a kid playing baseball confronting an umpire who had just called a "ball" a "strike." "You did not tell me beautiful Earth lady is your wife," he panted. "She owes for one day's rent, and you must pay." Then he lapsed into one of the memorized sentences of his welcome speech: "Having to ask payment for services which in happier circumstances I would gladly render free—"

The emptiness was all around Larry now. The numbing truth that he could never again find Karen, no matter where he looked, no matter how long he looked, overcame him; and he realized that searching for her had subtly become his *raison d'etre,* that without her to search for, to hope for, his life had no purpose, no meaning whatsoever. The shock of his loss sent his values tumbling, and shining like a sword through the chaos of what once had been an impregnable structure came the clear cold thought—*They let her die. They puttered about, playing with the outdated gadgets we sold them, counting the credits we taught them to value, and they would not even throw her a crust of bread—*

"—is a source of extreme humiliation to me," the chief concluded, "but I have no choice."

Larry's head was throbbing. He pulled his credit book out slowly. He handed it to the chief. Then he swung hard. The chief sank to his knees, spitting baby teeth and blood. Larry turned and resumed walking down the street. He walked slowly. He wanted the rest of the

villagers to run after him, to leap upon him. He wanted to swing wildly and crash his fists into counterfeit children's faces and see blood. But there was only silence behind him, and he walked on down the street, past the smugly humming generator, to the beach.

He lifted the little flier straight up. He hovered a moment at ten thousand feet, looking down at the lakes. The *Misseros d'n Gaedo,* he thought. The *Tears of God . . .*

Finally he pointed the prow of the flier toward the part of the horizon where the blue lakes ended and the tentacles of Earth began.

• • •

WORTH CITING

WITH A grant of $250,000 from the Rockefeller Foundation, the University of Wisconsin will engage in a four-year study of solar energy. Dr. Farrington Daniels, a leading authority on solar energy and its utilization, will direct the project. He holds the opinion that sun power will never really compete with atomic power in regions flooded with sunlight; but that solar power can compete with animal power. We are apt to forget, in this country of the farm tractor, the electric motor and the gasoline engine, that nearly all of the world's plowing, seeding and harvesting is still done by sheer human or animal effort. The energy of the sun costs nothing, and so we think that solar power ought to be cheap. But despite the generosity of the sun, even a small solar power plant must cover a considerable area and a point is rapidly reached where it is prohibitively expensive to develop more than a few horsepower.

The researchers will investigate the use of plastic mirrors as a cheap substitute for the flat and parabolic mirrors of glass and metal which are used in present solar cookers. They will also develop solar refrigerators, solar distillers (for salt water), solar engines, solar air-conditioning apparatus and solar irrigation pumps. The theoretical aspects will not be neglected either, and close studies will be made of photo-electric conversion and photosynthesis. All these studies will be applied to the practical aspects of making such cheap animal-replacing power possible in regions such as India, Egypt, Mexico and other hard pressed areas.

Our citation this month goes to the Rockefeller Foundation, other such philanthropic institutions, and to the researchers and universities who are determined to harness this abundant source of energy not only for the citizens of this country, but for the good of all Mankind.

THE PROXIES

It was natural that Dee refuse. Taking things by force wasn't in his framework. And maybe it was well—for Man can sometimes learn good, even from a robot . . .

BY

ARTHUR SELLINGS

Illustrated by Kelly Freas

THERE WAS nothing special about the flight—as far as the public knew. It was only that the third contact party to Ganymede had come back. But the crowds were massed so thickly that it took Dee nearly half an hour to cover the five hundred yards to the edge of the field.

The Space Department could easily have broken its own rules and dropped a copter to pick Dee up, but they chose not to. That action might have started rumors that something important was in train. The Space Department had acquired, during a century of failure, a reflex abhorrence to such rumors.

In a way the density and exuberance of the present crowds bore witness to that century of thwarted effort and deferred hope. It was four years now since Mankind had broken through—or half-through the space barrier—yet still the enthusiasm ran at flood. But Dee and his fellows were not only instruments of achievement; they were symbols of hope for the future. In Dee and his fellows, men saw the image of their own selves to be.

The copter that awaited him was an ordinary yellow civilian one, but the pilot was equipped with an SD authority which he showed to Dee with all the reverence of an acolyte baring a sacred relic. He ushered his passenger into the tiny cushioned cabin with a deference that made Dee feel uncomfortable. And when they grounded on the roof of the SD building he refused the fare that Dee offered.

"Go on, please take it," Dee in-

sisted. "Our kind doesn't have much use for money, really."

But the pilot lifted a beefy hand. "No sir. Carrying you is honor enough. First time I ever carried a real live—" he coughed quickly—"a real spaceman. Course, if you've got some little souvenir—just a pebble maybe, a real bit of Ganymede, my kid'd go crazy."

Dee rummaged obligingly in his container. "I'm afraid I haven't. I'm sorry."

But the man was diving at something that had fluttered from the container.

"Is this real Ganymedean?" he said excitedly.

Dee scrutinized it, "No, that's a piece of Martian canal grass. Why, I must have been carrying that round for two years or more."

"I can have it?"

"Why, of course."

Quickly, as if fearful of Dee's changing his mind, the pilot tucked the withered scrap of grass into the billfold, hopped into his cab and took off, leaving Dee shaking his head at a scale of values which he could never quite understand.

Inside, the Space Department's anxiety was at the boil. An attendant gave Dee the curtest of greetings, then hustled him to the inner temple, the Board Room.

Dee was surprised to see who was waiting for him. Jacques was there, naturally. So was Floyd, chief of SD. But the dozen other faces were those of the top members of the World Council. So it was that important? For a moment Dee had misgivings.

Jacques smiled and waved to him. Dee, constrained by the situation, bowed stiffly in brief salute and made his way to the place at the table indicated for him.

Jacques rose for a moment. "This, gentlemen, is Dee, leader of the Ganymedean expeditions and the oldest of our robots."

It was Sabin, Minister for Space, who began the questioning. First he politely asked if the radio was now repaired. Dee assured him that it was. Then Sabin asked the number one question, the one they were all gathered to hear the answer to.

"Tell us, Dee, you have a crystal with you?"

Dee, hesitated for only a moment. Then, "No, sir," he said.

In the sudden silence that descended the tiny whisper of the robot's vital mechanism seemed startlingly loud.

"And why not?"

"The Ganymedeans refused to part with one."

"But—" Sabin looked patiently puzzled, like a grown-up addressing a child—"you made our offers?"

"Yes, sir, exactly as instructed. They are an agricultural race, so I offered them implements. They refused. They have no power. I offered them the gas engine. They weren't interested. They appreciate music. I offered them a record player. They were interested, but the suggestion that it might be fair barter for a crystal seemed to offend them."

"But you offered them hundreds, thousands if they wanted them?"

"Indeed, sir, but they seemed quite hurt. Oh, in a friendly enough way; it was just that—"

"The guns?" said Sabin abruptly. "You offered them the guns?"

"No, sir," said Dee. "I did not offer them the guns."

"But they are tribal, and conduct tribal warfare?"

"Yes, sir."

"Then why did you not offer them the guns, as you were instructed?"

"Because I knew they would be rejected. Their warfare is more like a kind of gladiatorial contest, and is strictly limited both in scope and armament. Any alteration of the rules or the weapons would be unthinkable."

Sabin looked at Dee with eyes as expressionless as the robot's own. And when he spoke his voice possessed almost as little inflection.

"How did they react to the ultimatum?"

Dee stared levelly back at his interrogator. "I did not give the ultimatum."

The gathered humans seemed to twitch. What in fact happened was that a dozen pairs of eyebrows lifted, a dozen faces turned to Jacques and back. It was Sabin who voiced the word that had leapt into the brains behind those faces, a word that woke old, almost archetypal, fears.

"That is mutiny, Dee. You realize that?"

"Yes, sir," Dee answered simply. "But we could not bring ourselves to threaten force to friendly and intelligent beings."

The disquiet of the assembled administrators abated slightly, but was qualified now by annoyance—and a sense of impotence.

The World President, the Old Man himself, big and rough and blunt, interjected. "But that doesn't concern you. Nobody wants to use force, anyway. We made reasonable offers of exchange."

"Begging your pardon, sir," said Dee. "But the Ganymedeans did not consider them reasonable."

"Then what do the idiots want?"

"Nothing, sir."

"Nothing?"

"Yes, sir, there is nothing in the world, theirs or ours, that they would exchange a single crystal for. You see, the crystals are sacred. The flights they make with their aid are—" he paused momentarily to search for the word—"ritual. They would defend to the death any attempt to take a crystal by force."

"Ah," Sabin said quickly. "Then you did mention the possibility?"

"No, sir. Their warfare, such as it is, is also ritual. It is symbolic of resistance to anybody attempting to steal a crystal. Not that there is anybody to steal them, for no tribe would dream of stealing another tribe's stone. But it is a demonstration to their gods of their eternal readiness to defend their trust."

"Poppycock," said the President. He leaned over the table towards Dee. "They wouldn't be able to defend their trust for five minutes against twenty robots." The President was angry now. "Why didn't you use force, as you were instructed?"

"I am sorry," said Dee. "But no robot can kill any intelligent flesh-and-blood creature. Unless, of course, it threatened Mankind."

The President tried reasoning.

"But how many alien lives would have been lost? Twenty? Fifty? A hundred? This crystal is of vital importance to us. You know that, don't you?"

"Yes, sir."

"And don't you know that for every important advance that Mankind has made, some lives have been inevitably lost? That to get you and your kind into space, in fact, cost literally thousands?"

"Yes, sir, I realize that. But they were accidental deaths, not ones inflicted in cold blood. Moreover, sir, I gathered that should one crystal of the thirteen be lost, then every member of the tribe responsible would commit suicide at the shame of it."

"You seem to be well informed

about their beliefs," said Sabin, drily.

A sound came from the robot that sounded suspiciously like a manufactured cough. "Well, sir, they did try to convert us."

Jacques concealed a smile. Sabin looked pained.

It's beside the point," the President said gruffly. "But look, Dee, aren't we more important to you than a bunch of furry four-legged Ganymedeans? Are their hypothetical gods to be considered against us—us who made you?"

"Indeed, sir." The level, uninflected tone of the robot's voice seemed suddenly hushed. "That's the crux of it. We, unique among thinking creatures, know who made us. That is why we must respect creatures who only have faith. I knew that we could never carry out the ultimatum—or even present it. I hoped that it would not be necessary. If we were other than we are, perhaps we could do as you wish, but—"

Dee spread his hands in a gesture oddly human. The President raised his in exasperation and dropped them tiredly.

Jacques got to his feet and spoke to the robot.

"Now, Dee, let's put to one side the importance of these crystals to the human race. Will you do what has been asked of you, not for the sake of Mankind, but for my sake, and the sake of my grandfather who developed you, and my father who perfected you and wore himself out in the process?"

Dee hesitated for only a moment.

"I'm sorry, Mr. Jacques, believe me. But I can no more help refusing than a human can help withdrawing his hand from fire. It is integral."

And it was obviously final. Sabin turned to the robot. "You may go," he said coldly.

AS SOON as the robot had left, the President looked anxiously to Sabin. "Shouldn't he be guarded?"

"What with?" said Sabin, managing to sound respectful and ironic at the same time. "Another robot?"

"That's what I mean. This latest development is making me feel uneasy. I feel they can't be trusted any more."

Jacques hastened to reassure them.

"This isn't a new development. It's just an unforseen reaction to a new situation—a situation they haven't been confronted with before. But they could never turn against us. It only means that in this case they can't turn *with* us."

"It's not without significance," Floyd commented drily, "that the first time that happens should be on an issue that concerns them personally. So far, robots have had the monopoly of space flight because we haven't yet found a motive power that doesn't involve accelerations beyond the power of man to survive. The Ganymedeans have crystals with definite anti-gravitic properties. Once Man could develop that principle Dee and his fellows would take a back seat. So—" he spread his hands—"no crystal."

Trust Floyd, Jacques thought. But could he really be blamed for thinking that way? Floyd would never be more than the nominal head of SD—so long as SD had to rely on robots, and so long therefore as Floyd had to rely on Jacques. So it was no wonder if his feelings for robots fell some way short of veneration.

"What do you say to that, Jacques?" said the President.

"Only that it's erroneous," Jacques answered affably. "Robots don't think like that."

"But how can we be sure?" It was Sabin. "Oh, I know all about aptitude patterns and reaction tests, and suchlike. But can we really *know?* Surely, the cardinal point is, that they have intelligence. That implies a capability to conceal their true motives, doesn't it?"

"Perhaps. But any such motive could only be directed towards Man's good. They could have no personal desire to retain their monopoly."

"Personal?" queried the President. "What other kind of motive could they have, then?"

"*I* don't know, sir. I didn't bring the question of motive up. Dee's own comparison was to a human reflex action. Certainly, their reverence for intelligent life must be as basic to them as fear of fire is to us."

The President grunted.

"Fear—reverence," said Sabin, as if balancing the words. "He looked sharply at Jacques. "They have emotions, then?"

Jacques hesitated. "It's not quite as simple as that. They haven't anything resembling a glandular system. They cannot love—not physically, anyway. They do not have children to protect, nor an old age to build and provide against. So they haven't the physical bases for emotion."

"Well, then, *have* they emotions?"

"Let us say that such emotions as they have, while real enough, are intellectual in origin. That seems a contradiction, but it's the way it is. Or the nearest it can be expressed in terms of human feelings."

As soon as Sabin spoke next, Jacques recognized the corner into which the cold-eyed Minister had been hunting his quarry.

"Then, if they have—let us call them *simulacra* of emotions—then they also possess the simulacrum of a desire to go on living?"

"Ye-es."

"Then they can be threatened—on pain of extinction?"

"No, I'm afraid not. It was experimentally verified by my father," said Jacques, "over twenty years ago. He told a robot to stab me—or be destroyed." He smiled slightly. "My father was nothing if not the dedicated scientist. The robot refused. My father swung a seven pound sledge within three inches of its head. The head was only a makeshift casing, and fragile, but the robot didn't flinch."

"And your father destroyed it?"

"Good heavens, no! Not when it had cost fifty million dollars at that time." He added an afterthought. "That robot was Dee. Or essentially Dee. A lot has been added to him since."

"Can pain be inflicted upon a robot?" one of the Ministers put in.

"No, sir. Their equivalent to a nervous system is electro-magnetic. That was why my father swung the hammer in a near miss—a substitute for pain to show that he meant to implement his threat. You can't, after all, twist a robot's arm. Not to any effect, anyway."

"Then, surely," said Sabin, "you must have had some idea that Dee would save refused to carry out the ultimatum on Ganymede."

"No. You see, my father's directive all those years ago to stab me was purposeless and was directed against a human, a human that Dee knew. I thought that Dee would assess the situation on Ganymede intellectually, and balance human needs against his own constitutional aversion. I was wrong."

"Constitutional?" said Sabin implacably. "That brings us to the question of conditioning a robot. That or making one specifically for the job."

"That's right," said the President. "Why do we bother with robots who are nothing better, as I see it, than a lot of problem children? I remember, when I was a kid, they used to have robots that were remote-controlled dummies. Why can't we have a ship-crew of robots like that to go up after one of these crystals—controlled from right here on Earth?"

Jacques sighed. *That* chestnut! He thought every school kid these days knew the answer to that one.

"Because, Mr. President, remote control is radio control, and radio waves take a whole five seconds and more to travel a million miles. *And* five seconds to travel back. Which just about washes it out for space travel. A ship requires split-second handling at landing, and during flight. That's why all the years of research and billions in money had to be spent to evolve Dee and his kind. The crews *have* to have complete initiative."

The Old Man grunted. "All right, then, why not just ship one radio-controlled robot? Just for getting the crystal."

"But the others would know. They'd suspect something was wrong when the dummy robot took a longer and longer time to answer questions. The time-lag, remember, by the time the ship reached Ganymede, would be in the order of a full hour."

"Then, dammit, let the dummy one only be actuated when the ship lands. Send it out armed. One armed robot, even a dummy one, should be able to get through, shouldn't it?"

"But the time-lag would still operate," said Jacques patiently. "By the time you got vision signals back, the Ganymedeans would either flee with their precious crystal, or the real robots would immobilize the dummy."

"You mean," said the President angrily, "they'd take active steps against us. That's rather more drastic than just passive refusal to obey an order, isn't it?"

Sabin cut in suavely. "I'm sure, Mr. President, we needn't let such a fine point as the difference between sins of omission and of commission come into it, need we?

Surely the solution lies elsewhere. In conditioning the robots we already have." He turned to Jacques. "Can't you build a prime directive into one?"

"Easily enough," Jacques assured him.

"Well then?"

"The robot wouldn't be able to carry it out. It's like that old gag of a service principle. My grandfather wasted ten years worrying over that one, before he realized he was beating his head against a wall that wasn't there. A service principle works well enough for simple mechanisms. But try any kind of a prime directive on a full-fledged robot, and it means that every action it takes has to be assessed against the directive. Every action —every placing of one foot in front of the other. The effective result is a robot so inhibited as to be practically useless. Fortunately, the need for any kind of service principle was long ago found to be non-existent. Service is a robot's natural reaction, because it's his only function."

"Most of the time," said Floyd sarcastically.

"But, dammit," said the President, "can't a new crew be made—of simpler robots that aren't going to worry their tin heads about matters that don't concern them? This Dee is a whole lot too knowing for my liking."

"He has to be knowing," said Jacques. "A simpler robot could never handle a space ship. A robot has to be intelligent, educated, responsible, capable of making split-second judgments. He has to be a substitute man, in fact."

"But if his training's only technical—?"

"Even so, he has to be taught by men—at least, he has to be fed with man-conceived ideas. After all—" Jacques smiled wryly—"those are the only ones we know. And even technical data bears the print of man's thought as a whole. More than algebraic values, for instance, are implicit in the statement that e equals mc^2"

The silence that ensued, as the company mulled over the thought, was broken when the President said, "Then, in fact, the robots have us over a barrel?"

"Yes sir, I'm afraid so."

"We can't threaten them. We can't hurt them. If we got rid of the lot of them and started over again with a new bunch, we still wouldn't solve the problem, besides spending millions of dollars—" He addressed Jacques. "Look here, your father only *threatened* the robot. It wouldn't have taken much intelligence on the robot's part to see that that swing with the hammer was only a bluff. Say we carried out the experiment properly. Threaten a robot, but in front of the next robot in line. Then, when it refused, carry out the threat—destroy it. How would number two react then, would you say?"

Jacques reflected for a moment. "The same as number one, I should think."

The Old Man looked at him penetratingly from under shaggy brows. "And how would *you* react?"

"I?"

"If the robots have a vested interest in their monopoly, you have a vested interest in them, haven't you?"

"So?"

"Only that you might be—protecting them."

"Mr. President," said Jacques coldly. "It's true that I have a certain identity of interest with them. In a way I grew up with them. But I'm just as anxious as anyone here to see us get hold of one of those crystals. I've only tried to point out that drastic means will get us nowhere."

The President smiled briefly. "I believe you. I just wanted to be sure. But this experiment, how about it?"

"It wouldn't be of any use. You could implement the threat on Earth. But say number two did agree, and the rest with him? You still couldn't implement the threat when they were on Ganymede. You can't hold a pistol to a robot's head four million miles away."

The President stirred gloomilv. "That just about sums it up. *Hell!* Why did those crystals have to be discovered by primitive people who haven't the slightest real use for them, while we'd give our right arms for one!"

"One theory," said Sabin, "is that they may be relics of some older, greater race on Ganymede, or perhaps of some interplanetary visitor."

"Anyway," said the Old Man testily, "is it established beyond all shadow of a doubt that they really are anti-gravitic?"

"Definitely," Sabin assured him. "The atmosphere on Ganymede is too thin for the natives' aircraft to be any kind of glider. Besides, they rise vertically, as the films have shown us. The crystal is mounted on a ramshackle carriage of fiber. The tribe drags the carriage into one of the special valleys, which seem to harbor strong electro-magnetic fields. This seems to energize the crystal, or trigger it, and the aircraft takes to the air."

"I know all about that. But how do we know it's not just some kind of local effect? Some harnessing of the planetary field that wouldn't be of any use at all for motive power in space?"

"We don't," said Sabin. "But even so it would be something brand new. It might not be the key to the door, but it might well be the key to the box that contains it—and a few more besides."

"We're half a billion miles away from them." The President said ironically "And all that stands between them and us is a band of self-righteous servants who'd do anything for us. Oh yes—and a time-lag. That's all. Surely—"

"Just a moment, sir." It was Floyd. "I think I have it! Jacques says we can't hold a pistol to their heads all that distance away. But why can't we? Listen . . ."

The others listened with deepening conviction. They applauded when Floyd finished.

"Well, Jacques?" said the President. "Is that feasible? Won't that turn the trick and put them over the barrel?"

"Perhaps. But the time-lag still comes into it. As soon as we put them over it, they could get off again, before we could stop them."

"Em-mm, I see what you mean," the President said.

"Ah," said Floyd, "But we can beat that, too. We can put them over the barrel and tie them there in the same action." He proceeded to tell them how.

Jacques had to admire the neatness of it—and its devilish simplicity. He could find no flaws in it. The only objection he could think of was a small one, a tactical one.

"That will take a lot of work. Perhaps Dee and his colleagues will smell a rat if they're cleared off the ship."

"They can be told it's being repaired," said Sabin.

"But they always make their own repairs."

"Jacques, do you think they'll suspect us?"

"No. They may be knowledgeable, and highly intelligent, but I think a trick such as this would be beyond their conception. You see, they trust us."

The President coughed hastily. "Still, that point made about getting them off the ship still stands. We can't give them the slightest cause to start wondering."

"I know," said Heimer, Minister of Enlightenment. "We'll take Dee and his crew on a conducted tour, show the heroes off to the admiring populace."

There was general laughter at that. It put the problem in a package and tied it with the neatest of bows.

"I'd like to make one request," said Jacques when the laughter died. "I'd like to put the question to Dee fairly and squarely for the last time. If I make every point I can, he might agree to do it after all, without our having to do anything drastic."

"He agreed before," said Floyd warily.

"Because he thought he wouldn't have to give the ultimatum. But if he promised me this time, I'd stake my life on that promise holding."

"You can't argue away a reflex," Sabin commented.

"Then neither can you threaten it away. The reflex comparison was just that—a comparison. With them it's only an instinctive reaction to data accumulated. If I can feed Dee enough data on our side I may be able to tip it."

"Can't see any harm in it," said the President. "It might save a lot of time and trouble. But not a hint to him that we're anything but resigned to their stubbornness, you understand?"

"Naturally, sir."

"And while you're about it," the Old Man added drily, "you can be the one to tell him about the personal appearance tour."

THE LIGHT was fading from the autumn sky by the time Jacques got home. His housekeeper mentioned that a man from the vifo company had called to check on the set. Just a routine visit, he'd told her. And he'd only been a couple of minutes, she said.

Jacques smiled to himself as he

went on into the lounge. That hadn't been a man from the vifo company. Two minutes was just the time it took to fix a snoop. Oh well, he thought, it was better that way. It would prevent unnecessary suspicions.

"Chess, Mr. Jacques?" said Dee, as soon as his bulky, but strangely unawkward frame was through the door.

"Not this evening, Dee." Jacques grimaced. "I've had enough of a beating at the Department for one day."

"Oh," said Dee. "I'm sorry."

"About the chess?"

"No, about the trouble at the Department. But you understand, don't you?"

"In a way I do. I think, though, you're being rather absolutist about it. Why, Dee? There's more to it than what you told them at the Department, isn't there?"

The robot hesitated. "Yes," he admitted.

"Then what? You can tell *me*, surely." He felt a twinge of guilt as he said it, knowing that in a nearby prowl car two or three figures would be crouched, listening, watching.

"Well—" Dee shuffled his feet, and the man wondered, as he had many times before, at the odd way that metal and plastic could sometimes match the most human gestures of flesh and blood.

"Well?"

"It is not easy to say," said Dee at last, "without seeming disrespectful. You know we have studied Man with devotion, because he is our creator. The world, the universe, only make sense to us when viewed from the standpoint of Man and his interests—"

"Get to the point, Dee," Jacques said with good-humored impatience.

"Well, there are some things in Man's history that fill us with sorrow. So often his failings seem to transcend his virtues. Once he starts behaving badly he seems to get into a tightening spiral of guilt, from which he can escape only by drastic means."

"Well?" Jacques said, frowning now.

"Please, don't think I presume to criticize, Mr. Jacques. How could I? The failings are noble failings. If Man had only these lesser qualities and nothing else, he would still be a miracle to us. But if we can save him in any way from those failings, then we shall be content. With the Ganymedeans, Man has made his first contact with intelligent beings of another world—the first of many, I hope and believe. We robots should not be doing our duty if we helped to start space travel on the wrong foot—the way that white men colonized the native territories of Earth, for instance."

"Well, of all the high-handed—" Jacques thought he had understood the strange simplicity of robots' reasoning processes. Evidently he had been wrong. Perhaps he had been too close to them. This latest manifestation was the limit! "You weren't made to be our nursemaids," he went on angrily. "We've still got to make our *own* mistakes. That's the way we've always learned."

"Indeed, Mr. Jacques. But we can't make them for you. That would be a mistake on our part.

Damn your knowledge and your arrogant judgments, Jacques thought. Had he been wrong—and the President right when he had questioned their being so knowledgeable? But what Dee had just told him was only a reasoned justification of an automatic response to the situation. A less sophisticated robot would still react in the same way. In fact, it was Dee's knowledge that offered the only hope of convincing him. At least, knowledge could be argued with.

"I'm sorry," Dee added, "if our attitude seems high-handed. It's not meant to be, believe me."

"Whether it is or not," Jacques told him curtly, "the public wouldn't take a kindly view of it if they knew. Up to now this whole business has been kept secret. Shots of the flying machines have been deleted from the films you brought back, because that might start questions being asked, hopes raised. If the story of your refusal leaked out, you'd find your popularity taking a sudden slump—right in the opposite direction. Remember, you may be made of metal—but buildings are made of stone, and that never stopped an angry mob in the past."

"Now, Mr. Jacques," said Dee. "You're trying to frighten me."

"You idiot! I know that can't be done. I'm trying to point out two things to you. One is that humans aren't children. Another is that—well, if your lives only have meaning because you're helping Man, doesn't it mean something to you to be honored for it?"

"It makes us happy only because it makes Man happy," Dee answered. "As for our popularity, it might not be a bad thing if it *were* to suffer. We're too popular now. The hopes of Mankind are concentrated too much in us, and that's wrong. For does it not say in your own books of faith, *Thou shalt not make unto thee any graven image?*"

Jacques groaned. Just what could you make of a being who would serve you, gently but stubbornly defy you—and when you told him what a thundering good fellow people thought him, quote Scripture back at you? But the robot's words reminded him of the personal appearance tour. He broke the news.

"Oh," said Dee. "Well, if you think it's really necessary—"

"The Department thinks it is."

"Very well, Mr. Jacques."

"Of course—" the man eyed the robot speculatively—"once Man got into space himself, that would solve any burden of misgiving you might have about your undue popularity."

"Oh, he will find a way, Mr. Jacques."

At that—the sheer smug confidence of the robot's attitude—Jacques nearly lost his patience. But he managed to restrain himself. "But it may be too late, can't you see that? He has to find it, soon. These crystals obviously work on a principle that we haven't a clue to, as yet. We may not find it for hundreds, *thousands* of years. Doesn't that penetrate?"

"Yes, Mr. Jacques. But I'm sure that Man will find the answer for himself—by himself. And in time.

That's one of the really wonderful things about him—he always has found the answers in time."

"You—you maniacs!" Jacques exploded. "One moment you regard us as delinquent children, the next as gods. For heaven's sake, why can't you see us for what we are—fallible flesh and blood who need your help? Can't you see that your own attitude in this matter is limited?"

"Mr. Jacques, if we're limited, then we can't help it, can we? We can only act within the framework of our own natures. Talking can't change it. Nor can anything else. Out there in space we're absolutely on our own—"

"Why do you say that?" said Jacques, suddenly disquietened. *Did* Dee suspect?

But the robot's answer was guileless. "Only that we won't let Man down. We know he has to trust us. Believe me, whatever our limitations, we won't discredit our makers."

At any other time Jacques might have thought Dee's words rather noble. But now he was angry—angry and helpless. He spoke to the robot in a cold fury:

"You might have gone down in history as honored servants of men. But you won't. We won't forget this betrayal. When Man does get into space for himself, he'll take a particular pleasure in throwing you on the junk heap. He'll be glad to be rid of you, as he's always been glad to be rid of those who tried to limit his freedom—dictators, dogmatists, prohibitionists. At least, they were human; they knew what the choice was. But you don't understand that Man has to have freedom—even the freedom to make a fool or brute of himself. No matter how long it takes us to be independent of you, there's going to be a day marked up in future calendars in red—*The Day We Junked The Robots.*"

He spat the words, not caring that Security men were watching, not even caring whether Floyd was with them, as he doubtless was, watching and listening—and rejoicing at the spectacle of his failure to reason with his own creatures. And he came to the end, realizing that his invective had another motive. It couldn't deflect Dee; he had no illusions about that. But as a fact—a token of Man's need and frustration—there was a faint hope that it might register, tip the balance.

Dee took it all in silence—a silence that continued for moments after Jacques had finished. Then the robot said, "Perhaps it would have been better if we had never been created. It would have been simpler that way."

That was all. Then he turned on a metal heel and left. Jacques heard the street door slide open and shut. He stood there numbly. If the robot could think like that, then there *was* a risk, a big risk, in Floyd's plan.

FOUR PEOPLE were grouped intently over the television screen. The President, Floyd, Sabin —and Jacques. The first three were doing their best to conceal an ex-

pectant excitement. Jacques was having no such difficulty. He felt depressed. He was here only because he had to be.

Ten weeks had passed since Dee's final refusal. Jacques had not seen him since. In that time, the personal appearance tour had taken the robots from their ship, and a squad of human technicians had descended upon it. And the robots had returned, and after a few days taken off again for Ganymede.

The ship had been in hourly audio contact. Now the voice of Dee was announcing landing. The little group in front of the screen stopped fidgeting. The visiscreen suddenly brightened, celestatic popped and swirled for a moment, then the landscape of Ganymede took shape upon it—that unmistakably rocky and tumbled landscape that looked something like the Giant's Causeway on Earth. Dee's voice announced clearly:

"Landing safely accomplished—in the habitated sector. Have we any instructions?"

It was the usual routine. Floyd cast one confident glance round the group, then gave his instructions. He read them from a carefully-prepared script.

"Listen closely. You are to keep your visi-transmitter on and trained on the landscape. Then take ten of your crew and get a crystal. *By force*. Don't switch off. Get a crystal. Bring it back. Bring your camera into the ship, keeping it trained on the crystal. Take the crystal to specimen locker seven, deposit the crystal and close the locker. Then return immediately to Earth. Otherwise a sizeable piece of Ganymede, including yourselves and several tribes of Ganymedeans, will be blown to nothingness. Your ship is carrying a G-bomb sufficient to do that. The bomb was activated from Earth the moment the signal of your landing came through, and will be detonated from here if you resist orders. Don't think that you can escape by taking off before the detonation signal reaches you. The bomb is automatically linked to your firing system. Only when the crystal is deposited in specimen locker seven will the link to the firing system be disconnected.

"Don't try to force the locking mechanism to locker seven. It can't be forced that quickly. Don't try closing it, for it will register electronically here when it is shut properly, and only then. Keep everything in full view. No, tricks. No excuses. If you don't have that crystal inside of one hour, we shall detonate the bomb.

"We know the means are drastic, but you left us no alternative. Acknowledge receipt of this message—then get that crystal."

Floyd flipped off the mike, and turned to the others. "Well, that's it. The trap's sprung."

"Now all we have to do," said Sabin, "is pray the mechanism doesn't let us down."

"Checked and triple-checked," Floyd assured him.

"Only on Earth," the President rumbled. "We'll pray anyway."

Minutes passed.

Each of them in turn looked from the screen to his watch, then back again.

"There's nothing happening!" the President exploded suddenly.

Floyd smiled faintly. "It's all right, sir. The time-lag."

"Uh—oh, of course," the Old Man said.

More minutes passed.

The Old Man rose to his feet and began pacing about like a caged lion.

Sabin looked at Floyd. Floyd got up. "Well, it's going to be another—" he consulted his watch—"forty-five minutes. What say we break for a cup of coffee?"

"Anything's better than this waitting," the President said. His craggy face cracked in a grin. "And anything's better than coffee. We'll have something a bit stronger."

They moved to the door. Floyd turned back. "Coming, Jacques?"

"Oh, sure, sure," said Jacques, rising. There was nothing he could do here. There was nothing anyone could do anywhere.

THEY RETURNED in good time. Sabin, livened by a stiff whiskey, tried to ease the waiting by telling funny stories. They weren't funny, but they did help kill the tension. He was in the middle of one when the speaker suddenly crackled.

"Sh-sh," said Floyd, unnecessarily. Dee was answering.

"Message received. I regret it is not possible to get the crystal. You see, we are not on Ganymede—"

As he spoke the scene on the visiscreen suddenly whipped away. It was replaced by another. This plainly wasn't Ganymede. Ganymede had an atmosphere—thin, but atmosphere. Here the shadows were the black and absolute ones of complete airlessness. The terrain, too, was harsh and needle-sharp, quite unlike Ganymede's.

"I have, in fact," the voice of Dee went on, "the honor to announce the first landing on Callisto. I'm sorry to have to confess to a deception, but the view of Ganymede was only a still, inserted in the camera. We had an absorbing time on the trip, debating what measures you would have taken to enforce your orders. We tried to put ourselves in your place. Of course, that was not easy. It is indeed a tribute to our makers that we thought along precisely the same lines and reached an identical conclusion. Of course, we could have taken steps to locate and dismantle the bomb in transit, but we decided that we could not risk destruction of the ship and ourselves, knowing the high replacement cost of both items—"

The camera had been tracking as Dee spoke. It turned and showed the ship's embarkation port, approached it, then entered the ship. The camera wheeled into the ship's control room and was on Dee now.

"If you are angry with us, please destroy us here, for this is a lifeless satellite and no one would be harmed." He spread his hands. "It is better that we deceive you as we were forced to do, better that you should destroy us, than that your contact with the creatures of other worlds should start with violence. Forgive me for saying so again, but it is true.

"If you can see that, will you please free our firing system so that we can return to Earth for the bomb to be removed. We should like to be free as soon as possible for—ah, unqualified service. Please inform us."

The camera tracked off the robot onto a control panel. The sound band went silent.

"Blast their tin hides!" the President swore. "They did suspect. They knew." He sighed. "All right, Floyd, release all controls on the ship."

Floyd's fingers moved resignedly to the switches and opened them. "All right, Dee," he said. "You can fire in safety now. You may return home." He switched off leaving only the receivers open. "Damn," he said softly. "Why didn't I think of that? I had everything else reckoned."

"Well, it's too late now," said the President. "They out-tricked us." His voice was a rumble, but it seemed, to Jacques at least, to hold overtones of respect for the robots. The Old Man was a politico, and a tough one. This wasn't the first defeat he'd had to swallow.

"We'll just have to think of something else," said Sabin, his voice devoid of anger, regret—or any other emotion. "We've just got to convince them. Say we tell them the sun's going nova, or the Earth's going to blow up—and that we've just got to find a way out?" He looked elatedly at the others.

Jacques almost laughed to see the light of elation die as Sabin's gaze flickered from face to face. Floyd's expression was skeptical.

"No, Sabin," he said at last. "I'm sure Dee and his friends would insist—very humbly, of course—on checking up. Just to prevent our making another mistake.

"I guess we'll just have to face it. They're going to be our ambassadors—until we do find a way. And when we do we'll have to act the way they want us to. We'll have to live up to the good reputation they're going to give us. And, taking the long-term view, that mightn't be such a bad thing at that—"

Which was just about what Dee had said, thought Jacques to himself wryly.

"Another thing," said the President. "Nobody ever did any good with something they got for free. We've been too het-up about these crystals. They seemed like a Magic Carpet. Well, maybe they are and maybe they're not. Anyway, we'll find our own way. The world isn't going to go hang for quite a while, no matter what some of the more pessimistic may say. Setting out to find one thing, there's no knowing what else may turn up along the road. Why, if space travel hadn't turned out to be so darned difficult, then we'd never even have evolved a robot, because there wouldn't have been any need for one."

And that, thought Jacques, was a point that Dee hadn't mentioned. It was a truth that Man had to realize for himself.

An hour later only Jacques was left to hear the uninflected, emotionless voice of Dee say:

"Message received. Thank you. Returning home." • • •

When everything is either restricted, confidential or top-secret, a Reader is a very bad security risk.

juvenile delinquent

BY EDWARD W. LUDWIG

Illustrated by Ed Emsh

TICK-DE-TOCK, *tick-de-tock,* whispered the antique clock on the first floor of the house.

There was no sound save for the ticking—and for the pounding of Ronnie's heart.

He stood alone in his upstairs bedroom. His slender-boned, eight-year-old body trembling, perspiration glittering on his white forehead.

To Ronnie, the clock seemed to be saying:

Daddy's coming, Daddy's coming.

The soft shadows of September twilight in this year of 2056 were seeping into the bedroom. Ronnie welcomed the fall of darkness. He wanted to sink into its deep silence, to become one with it, to escape forever from savage tongues and angry eyes.

A burst of hope entered Ronnie's fear-filled eyes. Maybe

something would happen. Maybe Dad would have an accident. Maybe—

He bit his lip hard, shook his head. No. No matter what Dad might do, it wasn't right to wish—

The whirling whine of a gyro-car mushroomed up from the landing platform outside.

Ronnie shivered, his pulse quickening. The muscles in his small body were like a web of taut-drawn wires.

Sound and movement below. Mom flicking off the controls of the kitchen's Auto-Chef. The slow stride of her high heels through the living room. The slamming of a gyro-car door. The opening of the front door of the house.

Dad's deep, happy voice echoed up the stairway:

"Hi, beautiful!"

Ronnie huddled in the darkness by the half-open bedroom door.

Please, Mama, his mind cried, *please don't tell Daddy what I did.*

There was a droning, indistinct murmur.

Dad burst, "He was doing *what?"*

More murmuring.

"I can't believe it. You really saw him? . . . I'll be damned."

Ronnie silently closed the bedroom door.

Why did you tell him, Mama? Why did you have to tell him?

"Ronnie!" Dad called.

Ronnie held his breath. His legs seemed as numb and nerveless as the stumps of dead trees.

"Ronnie! Come down here!"

Like an automaton, Ronnie shuffled out of his bedroom. He stepped on the big silver disk on the landing. The auto-stairs clicked into humming movement under his weight.

To his left, on the wall, he caught kaleidoscopic glimpses of Mom's old pictures, copies of paintings by medieval artists like Rembrandt, Van Gogh, Cezanne, Dali. The faces seemed to be mocking him. Ronnie felt like a wounded bird falling out of the sky.

He saw that Dad and Mom were waiting for him.

Mom's round blue eyes were full of mist and sadness. She hadn't bothered to smooth her clipped, creamy-brown hair as she always did when Dad was coming home.

And Dad, handsome in his night-black, skin-tight Pentagon uniform, had become a hostile stranger with narrowed eyes of black fire.

"Is it true, Ronnie?" asked Dad. "Were you really—really reading a book?"

Ronnie gulped. He nodded.

"Good Lord," Dad murmured. He took a deep breath and squatted down, held Ronnie's arms and looked hard into his eyes. For an instant he became the kind, understanding father that Ronnie knew.

"Tell me all about it, son. Where did you get the book? Who taught you to read?"

Ronnie tried to keep his legs from shaking. "It was—Daddy, you won't make trouble, will you?"

"This is between you and me, son. We don't care about anyone else."

"Well, it was Kenny Davis. He—"

Dad's fingers tightened on Ronnie's arms. "Kenny Davis!" he spat. "The boy's no good. His father never had a job in his life. Nobody'd even offer him a job. Why, the whole town knows he's a Reader!"

Mom stepped forward. "David, you promised you'd be sensible about this. You promised you wouldn't get angry."

Dad grunted. "All right, son. Go ahead."

"Well, one day after school Kenny said he'd show me something. He took me to his house—"

"You went to that *shack?* You actually—"

"Dear," said Mom. "You promised."

A moment of silence.

Ronnie said, "He took me to his house. I met his dad. Mr. Davis is lots of fun. He has a beard and he paints pictures and he's collected almost five hundred books."

Ronnie's voice quavered.

"Go on," said Dad sternly.

"And I—and Mr. Davis said he'd teach me to read them if I promised not to tell anybody. So he taught me a little every day after school—oh, Dad, books are fun to read. They tell you things you can't

see on the video or hear on the tapes."

"How long ago did all this start?

"T—two years ago."

Dad rose, fists clenched, staring strangely at nothing.

"Two years," he breathed. "I thought I had a good son, and yet for two years—" He shook his head unbelievingly. "Maybe it's my own fault. Maybe I shouldn't have come to this small town. I should have taken a house in Washington instead of trying to commute."

"David," said Mom, very seriously, almost as if she were praying, "it won't be necessary to have him memory-washed, will it?"

Dad looked at Mom, frowning. Then he gazed at Ronnie. His soft-spoken words were as ominous as the low growl of thunder:

"I don't know, Edith. I don't know."

DAD STRODE to his easy chair by the fireplace. He sank into its foam-rubber softness, sighing. He murmured a syllable into a tiny ball-mike on the side of the chair. A metallic hand raised a lighted cigarette to his lips.

"Come here, son."

Ronnie followed and sat on the hassock by Dad's feet.

"Maybe I've never really explained things to you, Ronnie. You see, you won't always be a boy. Someday you'll have to find a way of making a living. You've only two choices: You work for the government, like I do, or for a corporation."

Ronnie blinked. "Mr. Davis doesn't work for the gover'ment or for a corpor-ation."

"Mr. Davis isn't normal," Dad snapped. "He's a hermit. No decent family would let him in their house. He grows his own food and sometimes he takes care of gardens for people. I want you to have more than that. I want you to have a nice home and be respected by people."

Dad puffed furiously on his cigarette.

"And you can't get ahead if people know you've been a Reader. That's something you can't live down. No matter how hard you try, people always stumble upon the truth."

Dad cleared his throat. "You see, when you get a job, all the information you handle will have a classification. It'll be Restricted, Low-Confidential, Confidential, High-Confidential, Secret, Top-Secret. And all this information will be in writing. No matter what you do, you'll have access to some of this information at one time or another."

"B—but why do these things have to be so secret?" Ronnie asked.

"Because of competitors, in the case of corporations—or because of enemy nations in the case of government work. The written material you might have access to could describe secret weapons and new processes or plans for next year's advertising—maybe even a scheme for, er, liquidation of a rival. If all facts and policies were made public, there might be criticism, controversy, opposition by certain groups. The less people know about things, the better. So

we have to keep all these things secret."

Ronnie scowled. "But if things are written down, someone has to read them, don't they?"

"Sure, son. One person in ten thousand might reach the point where his corporation or bureau will teach him to read. But you prove your abilitv and loyalty first. By the time you're 35 or 40, they might *want* you to learn to read. But for young people and children —well, it just isn't done. Why, the President himself wasn't trusted to learn till he was nearly fifty!"

Dad straightened his shoulders. "Look at me. I'm only 30, but I've been a messenger for Secret material already. In a few years, if things go well, I should be handling *Top*-Secret stuff. And who knows? Maybe by the time I'm 50 I'll be *giving* orders instead of carrying them. Then I'll learn to read, too. That's the right way to do it."

Ronnie shifted uncomfortably on the hassock. "But can't a Reader get a job that's not so important. Like a barber or a plumber or—"

"Don't you understand? The barber and plumbing equipment corporations set up their stores and hire men to work for them. You think they'd hire a Reader? People'd say you were a spy or a subversive or that you're crazy like old man Davis."

"Mr. Davis isn't crazy. And he isn't old. He's young, just like you, and—"

"Ronnie!"

Dad's voice was knife-sharp and December-cold. Ronnie slipped off the hassock as if struck physically by the fury of the voice. He sat sprawled on his small posterior, fresh fear etched on his thin features.

"Damn it, son, how could you even *think* of being a Reader? You've got a life-sized, 3-D video here, and we put on the smell and touch and heat attachments just for you. You can listen to any tape in the world at school. Ronnie, don't you realize I'd lose my job if people knew I had a Reader for a son?"

"B—but, Daddy—"

Dad jumped to his feet. "I hate to say it, Edith, but we've got to put this boy in a reformatory. Maybe a good memory-wash will take some of the nonsense out of him!"

Ronnie suppressed a sob. "No, Daddy, don't let them take away my brain. Please—"

Dad stood very tall and very stiff, not even looking at him. "They won't take your brain, just your memory for the past two years."

A corner of Mom's mouth twitched. "David, I didn't want anything like this. I thought maybe Ronnie could have a few private psychiatric treatments. They can do wonderful things now—permi-hypnosis, creations of artificial psychic blocks. A memory-wash would mean that Ronnie'd have the mind of a six-year-old child again. He'd have to start to school all over again."

Dad returned to his chair. He buried his face in trembling hands, and some of his anger seemed replaced by despair. "Lord, Edith, I don't know what to do."

He looked up abruptly, as if struck by a chilling new thought. "You can't keep a two-year memory-wash a secret. I never thought of that before. Why, that alone would mean the end of my promotions."

Silence settled over the room, punctuated only by the ticking of the antique clock. All movement seemed frozen, as if the room lay at the bottom of a cold, thick sea.

"David," Mom finally said.

"Yes?"

"There's only one solution. We can't destroy two years of Ronnie's memory—you said that yourself. So we'll have to take him to a psychiatrist or maybe a psychoneurologist. A few short treatments—"

Dad interrupted: "But he'd *still* remember how to read, unconsciously anyway. Even permi-hypnosis would wear off in time. The boy can't keep going to psychiatrists for the rest of his life."

Thoughtfully he laced his fingers together. "Edith, what kind of a book was he reading?"

A tremor passed through Mom's slender body. "There were three books on his bed. I'm not sure which one he was actually reading."

Dad groaned. *"Three* of them. Did you burn them?"

"No, dear, not yet."

"Why not?"

"I don't know. Ronnie seemed to like them so much. I thought that maybe tonight, after you'd seen them—"

"Get them, damn it. Let's burn the filthy things."

Mom went to a mahogany chest in the dining room, produced three faded volumes. She put them on the hassock at Dad's feet.

Dad gingerly turned a cover. His lips curled in disgust as if he were touching a rotting corpse.

"Old," he mused, "—so very old. Ironic, isn't it? Our lives are being wrecked by things that should have been destroyed and forgotten a hundred years ago."

A sudden frown contorted his dark features.

Tick-de-tock, tick-de-tock, said the antique clock.

"A hundred years old," he repeated. His mouth became a hard, thin line. "Edith, I think I know why Ronnie wanted to read, why he fell into the trap so easily."

"What do you mean, David?"

Dad nodded at the clock, and the slow, smouldering anger returned to his face. "It's *your* fault, Edith. You've always liked old things. That clock of your great-great-grandmother's. Those old prints on the wall. That stamp collection you started for Ronnie—stamps dated way back to the 1940's."

Mom's face paled. "I don't understand."

"You've interested Ronnie in old things. To a child in its formative years, in a pleasant house, these things symbolize peace and security. Ronnie's been conditioned from the very time of his birth to like old things. It was natural for him to be attracted by books. And we were just too stupid to realize it."

Mom whispered hoarsely, "I'm sorry, David."

Hot anger flashed in Dad's eyes. "It isn't enough to be sorry. Don't

you see what this means? Ronnie'll have to be memory-washed back to the time of birth. He'll have to start life all over again."

"No, David, no!"

"And in my position I can't afford to have an eight-year-old son with the mind of a new-born baby. It's got to be Abandonment, Edith, there's no other way. The boy can start life over in a reformatory, with a complete memory-wash. He'll never know we existed, and he'll never bother us again."

Mom ran up to Dad. She put her hands on his shoulders. Great sobs burst from her shaking body.

"You can't, David! I won't let—"

He slapped her then with the palm of his hand. The sound was like a pistol shot in the hot, tight air.

Dad stood now like a colossus carved of black ice. His right hand was still upraised, ready to strike again.

Then his hand fell. His mind seemed to be toying with a new thought, a new concept.

He seized one of the books on the hassock.

"Edith," he said crisply, "just what was Ronnie reading? What's the name of this book?"

"The—The Adventures of Tom Sawyer," said Mom through her sobs.

He grabbed the second book, held it before her shimmering vision.

"And the name of this?"

"Tarzan of The Apes." Mom's voice was a barely audible croak.

"Who's the author?"

"Edgar Rice Burroughs."

"And this one?"

"The Wizard of Oz."

"Who wrote it?"

"L. Frank Baum."

He threw the books to the floor. He stepped backward. His face was a mask of combined sorrow, disbelief, and rage.

"Edith." He spat the name as if it were acid on his tongue. "Edith, *you can read!"*

MOM SUCKED in her sobs. Her chalk-white cheeks were still streaked with rivulets of tears.

"I'm sorry, David. I've never told anyone—not even Ronnie. I haven't read a book, haven't even looked at one since we were married. I've tried to be a good wife—"

"A good wife." Dad sneered. His face was so ugly that Ronnie looked away.

Mom continued, "I—I learned when I was just a girl. I was young like Ronnie. You know how young people are—reckless, eager to do forbidden things."

"You lied to me," Dad snapped. "For ten years you've lied to me. Why did you want to read, Edith? *Why?"*

Mom was silent for a few seconds. She was breathing heavily, but no longer crying. A calmness entered her features, and for the first time tonight Ronnie saw no fear in her eyes.

"I wanted to read," she said, her voice firm and proud, "because, as Ronnie said, it's fun. The video's nice, with its dancers and lovers and

Indians and spacemen—but sometimes you want more than that. Sometimes you want to know how people feel deep inside and how they think. And there are beautiful words and beautiful thoughts, just like there are beautiful paintings. It isn't enough just to hear them and then forget them. Sometimes you want to keep the words and thoughts before you because in that way you feel that they belong to you."

Her words echoed in the room until absorbed by the ceaseless, ticking clock. Mom stood straight and unashamed. Dad's gaze traveled slowly to Ronnie, to Mom, to the clock, back and forth.

At last he said, "Get out."

Mom stared blankly.

"Get out. Both of you. You can send for your things later. I never want to see either of you again."

"David—"

"I said *get out!*"

Ronnie and Mom left the house. Outside, the night was dark and a wind was rising. Mom shivered in her thin house cloak.

"Where will we go, Ronnie? Where, where—"

"I know a place. Maybe we can stay there—for a little while."

"A little while?" Mom echoed. Her mind seemed frozen by the cold wind.

Ronnie led her through the cold, windy streets. They left the lights of the town behind them. They stumbled over a rough, dirt country road. They came to a small, rough-boarded house in the deep shadow of an eucalyptus grove. The windows of the house were like friendly eyes of warm golden light.

An instant later a door opened and a small boy ran out to meet them.

"Hi, Kenny."

"Hi. Who's that? Your mom?"

"Yep. Mr. Davis in?"

"Sure."

And a kindly-faced, bearded young man appeared in the golden doorway, smiling.

Ronnie and Mom stepped inside. • • •

The Greatest Hoax of All!

WHEN A MAN believes in something, what is supreme disillusionment? In the December issue, James E. Gunn tells the thrilling story of a young space cadet who finally gets the chance of a lifetime but discovers that a spaceman is made of other things than schools and heroes and traditions. It's called HOAX and it's one of Mr. Gunn's very best! . . . ALSO in this issue are such top-flight stories as THE EARTHMAN, by Irving Cox, Jr.; THE BARBARIANS, by Tom Godwin; THE LABORATORY, by Jerome Bixby; and still others by James McKimmey, Jr., Alice Jones, George Smith . . . So don't miss the exciting December issue of IF—on sale the 12th of October.

The problems of space were multiple enough without the opinions and treachery of Senator McKelvie—who really put the "fat into the fire". All Kevin had to do was get it out . . .

SLOW BURN

BY HENRY STILL

"TELL 'EM to look sharp, Bert. This pickup's got to be good."

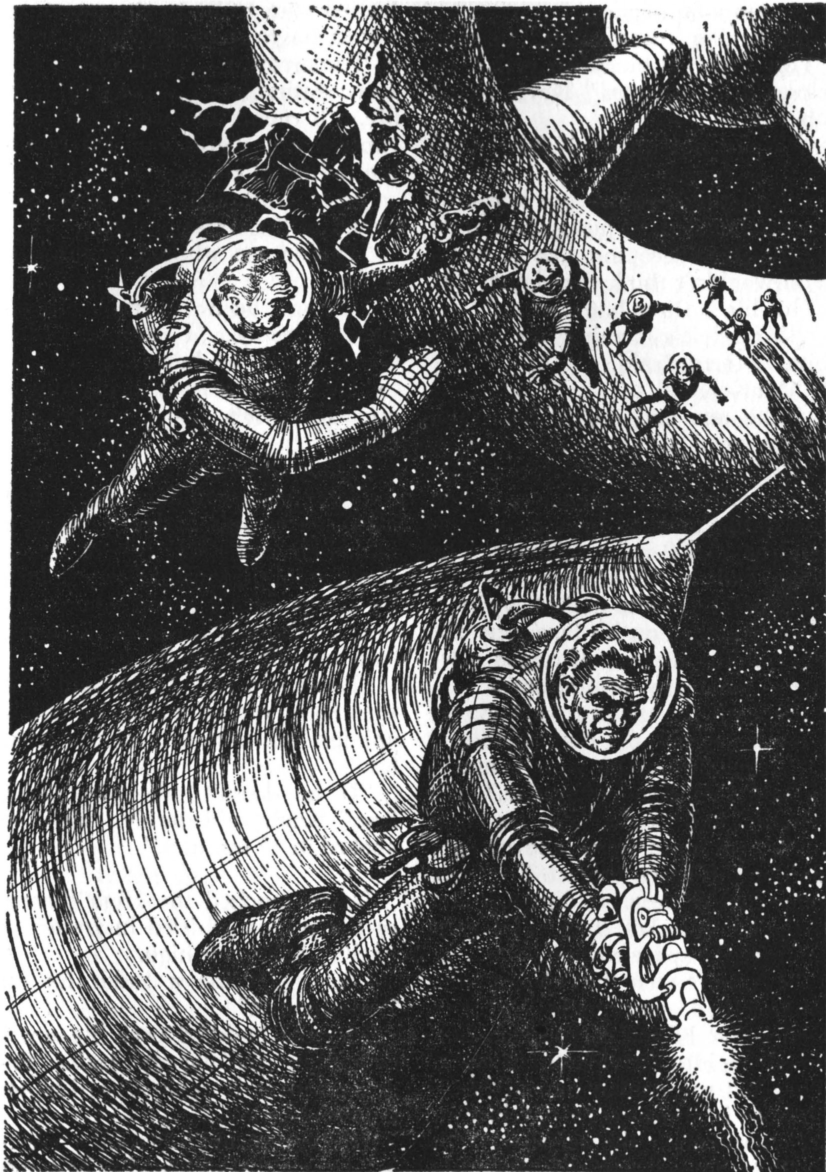
Kevin Morrow gulped the last of his coffee and felt its bitter acid gurgle around his stomach. He stared moodily through the plastic port where the spangled skirt of stars glittered against the black satin of endless night and a familiar curve of the space station swung ponderously around its hub.

Four space-suited tugmen floated languidly outside the rim. Beyond them the gleaming black and white moonship tugged gently at her mooring lines, as though anxious to be off.

Bert Alexander radioed quiet instructions to the tugmen.

"Why the hell couldn't he stay down there and mind his own business?" Kevin growled. "McKelvie's been after our hide ever since we got the appropriation, and now this." He slapped the flimsy radiogram.

He looked up as the control room hatch opened. Jones came in from



Illustrated by Kelly Freas

the astronomy section.

"Morning, commander," he said. "You guys had breakfast yet? Mess closes in 30 minutes." Kevin shook his head.

"We're not hungry," Bert filled in.

"You think you've got nerves?" Jones chuckled. "I just looked in on Mark. He's sleeping like a baby. You wouldn't think the biggest day of his life is three hours away."

"McKelvie's coming up to kibitz," Morrow said.

"McKelvie!"

"The one and only," Bert said. "Here, read all about it."

He handed over the morning facsimile torn off the machine when the station hurtled over New England at 18,000 miles an hour. The upper half of the sheet bore a picture of the white-maned senator. Clearly etched on his face were the lines of too many half-rigged elections, too many compromises.

Beneath the picture were quotes from his speech the night before.

"As chairman of your congressional watchdog committee," the senator had said, "I'll see that there's no more waste and corruption on this space project. For three years they've been building a rocket —the moon rocket, they call it—out there at the space station."

"I haven't seen that rocket," the senator had continued. "All I've seen is five billion of your tax dollars flying into the vacuum of space. They tell me a man named Mark Kramer is going to fly out in that rocket and circle the moon.

"But he will fail," McKelvie had promised. "If God had intended man to fly to the moon, he would have given us wings to do it. Tomorrow I shall fly out to this space station, even at the risk of my life. I'll report the waste and corruption out there, and I'll report the failure of the moon rocket."

Jones crumpled the paper and aimed at the waste basket.

"Pardon me while I vomit," he said.

"We've been there," Kevin sighed deeply. "I suppose Max Gordon will be happy."

"He'll wear a hole in his tongue on McKelvie's boots," Bert said bitterly.

"Is it that bad?"

"How else would he get a first class spaceman's badge?" Morrow said. "He can't add two and two. But if stool pigeons had wings, he'd fly like a jet. We can't move up here without McKelvie knowing and howling about it.

"Don't worry," Jones said, "If the moon rocket makes it, public opinion will take care of the senator."

"If he doesn't take care of us first," Kevin said darkly. "He'll be aboard in 15 minutes."

Dawn touched the High Sierras as the station whirled in from the Pacific, 500 miles high.

"Bert. Get me a radar fix on White Sands."

Morrow huddled over the small computer, feeding in radar information as it came from his assistant.

"Rocket away!" Blared a radio speaker on the bulkhead. The same message carried to the four space-

suited tugmen floating beyond the rim of the wheel, linked with lifelines.

Jones watched interestedly out the port.

"There she is!" he yelled.

Sunlight caught the ascending rocket, held it in a splash of light. The intercept technique was routine now, a matter of timing, but for a moment Kevin succumbed to the frightening optical illusion that the rocket was approaching apex far below the station. Then, slowly, the slender cylinder matched velocity and pulled into the orbit, crept to its destination.

With deceptive ease, the four human tugs attached magnetic shoes and guided the projectile into the space station hub with short, expert blasts of heavy rocket pistols.

"Take over Bert," Morrow directed, "I guess I'm the official greeter." He hurried out of the control room, through a short connecting tube and emerged floating in the central space surrounding the hub where artificial gravity fell to zero. Air pressure was normal to transfer passengers without space suits.

The connecting lock clanked open. The rocket pilot stepped out.

"He got sick," the pilot whispered to Kevin. "I swabbed him off, but he's hoppin' mad."

The senator's mop of white hair appeared in the port. Kevin braced to absorb a tirade, but McKelvie's deep scowl changed to an expression of bliss as he floated weightless into the tiny room.

"Why, this is wonderful!" he sputtered. He waved his arms like a bird and kicked experimentally with a foot.

"Grab him!" Kevin shouted. "He's gone happy with it."

The pilot was too late. McKelvie's body sailed gracefully through the air and his head smacked the bulkhead. His eyes glazed in a frozen expression of carefree happiness.

Kevin swore. "Now he'll accuse us of a plot against his life. Help me get him to sick bay."

The two men guided the weightless form into a tube connecting with the outer ring. As they pushed outward, McKelvie's weight increased until they carried him the last 50 feet into the dispensary compartment.

Max Gordon burst wild-eyed into the room.

"What have you done to the senator?" he shouted. "Why didn't you tell me he was coming up?" Morrow made sure McKelvie was receiving full medical attention before he turned to the junior officer.

"He went space happy and bumped his head," Kevin said curtly, "and there was no more reason to notify you than the rest of the crew." He walked away. Gordon bent solicitously over his unconscious patron.

Kevin found Anderson in the passageway.

"I ordered them to start fueling Moonbeam," Bert said.

"Good. Is Mark awake?"

"Eating breakfast. The psycho's giving him a clinical chat."

"I wish it were over." Morrow brushed back his hair.

"You've really got the jitters, huh chief?"

Morrow turned angrily and then tried to laugh.

"I'd sell my job for a nickel right now, Bert. This will be touch and go, without having the worst enemy of space flight aboard. If this ship fails, it's more than a rocket or the death of a man. It'll set the whole program back 50 years."

"I know," Bert answered, "but he'll make it."

Footsteps sounded in the tube outside the cabin. Mark Kramer walked in.

"Hi, chief," he grinned, "Moonbeam ready to go?"

"The techs are out now and fuel's aboard. How about you? Shouldn't you get some rest?"

"That's all I've had since they shipped me out here." Kramer laughed. "It'll be a snap. After all, I'll never make over two gees and pick up 7000 mph to leave you guys behind. Then I play ring around the rosy, take a look at Luna's off side and come home. Just like that."

"Just like that," Kevin whispered meditatively. The moon rocket, floating there outside the station's rim was ugly, designed never to touch a planet's atmosphere, but it was the most beautiful thing man had ever built, assembled in space from individual fragments boosted laboriously from the Earth's surface.

Another clatter of footsteps approached the hatch. Max Gordon entered and stood at attention as Senator McKelvie made a dignified entrance. The senator wore an adhesive patch on his high forehead. He turned to Kramer.

"Young man," he rumbled, "are you the fool risking your life in that—that thing out there? You must know it'll never reach the moon. I know it'll never—"

Kramer's face paled slightly and he moved swiftly between the two men. Without using force, he backed the senator and Gordon through the hatch and slammed it behind him. Anger was a knot of green snakes in his belly.

"I want to talk to that pilot," McKelvie said belligerently.

"I'm sorry, senator. The best psychiatrists on Earth worked eight months to condition Kramer for this flight. He must not be emotionally disturbed. You can't talk to him."

"You forbid. . . ?" McKelvie exploded, but Morrow intercepted smoothly.

"Gordon. I'm sure the senator would like a tour of the station. Will you escort him?"

McKelvie's face reddened and Max opened his mouth to object.

"Gordon!" Morrow said sharply. Max closed his mouth and guided the grumbling congressman up the tube.

"TWENTY MINUTES to blastoff," Bert reported.

"Right," Kevin acknowledged absently. He studied taped data moving in by radio facsimile from the mammoth electronic computor on Earth.

"Our orbit's true," he said with satisfaction and wiped a sweaty palm on his trousers. "Get the time check, Bert." Beeps from the Naval Observatory synchronized with the space station chronometer.

"Alert Kramer."

"He's leaving the airlock now," Bert said. From the intercom, Morrow listened to periodic reports from crew members as McKelvie and Gordon progressed in their tour.

"Mr. Morrow?"

"Right."

"This is Adams in Section M. The senator and Gordon have been in the line chamber for 10 minutes."

"Boot 'em out," Kevin said crisply. "Blastoff in 15 minutes."

"That machinery controls the safety lines," Bert said.

Kevin looked up with a puzzled frown, but turned back to watch Kramer creeping along a mooring line to the moon ship. A group of tugmen helped the space-suited figure into the rocket, dogged shut the hatch and cleared back to the station rim.

"Station to Kramer," on the radio, "are you ready."

"All set," came the steady voice, "give me the word."

"All right. Five minutes." Kevin turned to the intercom. "Release safety lines."

In the weightlessness of space the cables retained their normal rigid line from the rim of the station to the rocket. They had been under no strain. Their shape would not change until they were reeled in.

"Two minutes," Morrow warned. Tension grew as Anderson began the slow second count. The hatch opened. McKelvie and Gordon entered the control room. No one noticed it.

"Five . . . four . . . three . . . two . . . one . . ."

A gout of white fire jabbed from the stern of the rocket. Slowly the ship moved forward.

Morrow watched tensely, hands gripping a safety rail.

Then his face froze in a mask of disbelief and horror.

"The lines!" he shouted. "The safety lines fouled!"

He fell sprawling as the space station lurched heavily, tipped upward like a giant platter under the inexorable pull of the moon rocket.

Kevin scrambled back to the viewport, the shriek of tortured metal in his ears. Horror-stricken, he saw the taut cables that had failed to release. Then a huge section of nylon, aluminum and rubber ripped out of the station wall, was visible a second in the rocket glare, and vanished.

Escaping air whistled through the crippled structure. Pressure dropped alarmingly before the series of automatic airlocks clattered reassuringly shut.

Kevin's hand was bleeding. He staggered with the frightening new motion of the space station. Gordon and the senator had collapsed against a bulkhead. McKelvie's pale face twisted with fear and amazement. Blood streaked down the pink curve of his forehead.

Individual station reports trickled through the intercom. Miraculously, the bulk of the station had escaped damage.

"Line chamber's gone," Adams reported. "Other bulkheads holding, but something must have jammed the line machines. They ripped right out."

"Get repair crews in to patch

leaks," Morrow shouted. He turned frantically to the radio. "Station to Moonbeam. Kramer! Are you all right."

He waited an agonizing minute, then a scratchy voice came through.

"Kramer, here. What the hell happened? Something gave me a terrific yaw, but the gyro pulled me back on course. Fuel consumption high. Otherwise I'm okay."

"You ripped out part of the station," Kevin yelled. "You're towing extra mass. Release the safety lines if you can."

The faint answer came back, garbled by static.

Another disaster halted a new try to reach him.

With a howling rumble, the massive gyroscope case in the bulkhead split open. The heavy wheel, spinning at 20,000 revolutions per minute, slowly and majestically crawled out of its gimbals; the gyroscope that stabilized the entire structure remained in its plane of revolution, but ripped out of its moorings when the station was forcibly tilted.

Spinning like a giant top, the gyro walked slowly across the deck. McKelvie and Gordon scrambled out of its way.

"It'll go through!" Bert shouted. Kevin leaped to a chest of emergency patches.

The wheel ripped through the magnesium shell like a knife in soft cheese. A gaping rent opened to the raw emptiness of space, but Morrow was there with the patch. Before decompression could explode the four creatures of blood and bone, the patch slapped in place, sealed by the remaining air pressure.

Trembling violently, Kevin staggered to a chair and collapsed. Silence rang in his ears. Anderson gripped the edge of a table to keep from falling. Kevin turned slowly to McKelvie and Gordon.

"Come here," he said tonelessly.

"Now see here, young man—" the senator blustered.

"I said come here!"

The two men obeyed. The commander's voice held a new edge of steel.

"You were the last to leave the line control room," he said. *"Did you touch that machinery?"*

Gordon's face was the color of paste. His mouth worked like a suffocating fish. McKelvie recovered his bluster.

"I'm a United States senator," he stuttered, "I'll not be threatened . . ."

"I'm not threatening you," Kevin said, "but if you fouled that machinery to assure your prediction about the rocket, I'll see that you hang. Do you realize that gyroscope was the only control we had over the motion of this space station? Whatever it does now is the result of the moon rocket's pull. We may not live to see that rocket again."

As though verifying Morrow's words, the lights dimmed momentarily and returned to normal brilliance. A frightened voice came from the squawkbox.

"Hey, chief! This is power control. We've lost the sun!"

Anderson looked out the port, studied the slowly wheeling stars.

"Mother of God," he breathed. "we're flopping . . . like a flapjack

over a stove."

And the power mirrors were on only one face of the space station, mirrors that collected the sun's radiation and converted it to power. Now they were collecting nothing but the twinkling of the stars.

The vital light would return as the station continued its new, awkward rotation, but would the intermittent exposure be sufficient to sustain power?

"Shut down everything but emergency equipment," Morrow directed. "When we get back on the sun, soak every bit of juice you can into those batteries." He turned to Gordon and McKelvie. "Won't it be interesting if we freeze to death, or suffocate when the air machines stop?"

Worry replaced anger as he turned abruptly away from them.

"We've got a lot of work to do, Bert," he said crisply. "See if you can get White Sands."

"It's over the horizon, I'll try South Africa." Anderson worked with the voice radio but static obliterated reception. "Here comes a Morse transmission," he said at last. Morrow read slowly as tape fed out of the translator:

"Radar shows moon rocket in proper trajectory. Where are you?"

The first impulse was to dash to the viewport and peer out. But that would be no help in determining position.

"Radar, Bert," he whispered. Anderson verniered in the scope, measuring true distance to Earth's surface. He read the figure, swore violently, and readjusted the instrument.

"It can't be," he muttered at last. "This says we're 865 miles out."

"365 miles outside our orbit?" Morrow said calmly. "I was afraid of that. That tug from the Moonbeam not only cart-wheeled us, it yanked us out." He snatched a sheet of graph paper out of a desk drawer and penciled a point.

"Give me a reading every 10 seconds."

Points began to connect in a curve.

And the curve was something new.

"Get Jones from astronomy," Kevin said at last. "He can help us plot and maybe predict."

When the astronomer arrived minutes later, the space station was 1700 miles above the Earth, still shearing into space on an ascending curve.

"Get a quick look at this, Jones," Kevin spoke rapidly. "See if you can tell where it will be two hours from now."

The astronomer studied the curve intently as it continued to grow under Kevin's pencil.

"It may be an outward spiral," he said haltingly, "or it could be a . . . parabola."

"No!" Bert protested. "That would throw us into space. We couldn't—"

"We couldn't get back," Kevin finished grimly. "There'd better be an alternative."

"It could be an ellipse," Jones said.

"It must be an ellipse," Bert said eagerly. "The Moonbeam couldn't save given us 7000 mph velocity."

Abruptly the lights went out.

The radar scope faded from green to black. Morrow swore a string of violent oaths, realizing in the same instant that anger was useless when the power mirrors lost the sun.

He bellowed into the intercom, but the speaker was dead. Already Bert was racing down the tube to the power compartment. Minutes later, the intercom dial flickered red. Morrow yelled again.

"You've got to keep power to this radar set for the next half-hour. Everything else can stop, even the air machines, but *we've got to find out where we're going.*

The space station turned again. Power resumed and Kevin picked up the plot.

"We're 6000 miles out!" he breathed.

"But it's flattening," Jones cried. "The curve's flattening!" Bert loped back into the control room. Jones snatched the pencil from his superior.

"Here," he said quickly, "I can see it now. Here's the curve. It's an ellipse all right."

"It'll carry us out 9600 miles," Bert gasped. "No one's ever been out that far."

"All right," Morrow said. "That crisis is past. The next question is where are we when we come back on nadir. Bert, tell the crew what's going on. Jones, you can help me. We've got to pick up White Sands and get a fuel rocket up here to push."

"Good Lord, look at that!" Jones breathed. He stared out the port. The Earth, a dazzling huge globe filling most of the heavens, swam slowly past the plastic window. It was the first time they had been able to see more than a convex segment of oceans and continents. Kevin looked, soberly, and turned to the radio.

The power did not fail in the next crazy rotation of the station.

"There's the West Coast." Kevin pointed. "In a few minutes I can get White Sands, I hope."

Jones had taken over the radar plot. At last his pencil reached a peak and the curve started down. The station had reached the limit of its wild plunge into space.

"Good," Kevin muttered. "See if you can extrapolate that curve and get us an approximation where we'll cut in over the other side." The astronomer figured rapidly and abstractedly.

"May I remind you young man," McKelvie's voice boomed, "you have a United States senator aboard. If anything happens—"

"If anything happens, it happens to all of us," Kevin answered coldly. "When you're ready to tell me what *did* happen, I'm ready to listen.

Silence.

"White Sands, this is Station I. Come in please."

Kevin tried to keep his voice calm, but the lives of 90 men rode on it, on his ability to project his words through the crazy hash of static lacing this part of space from the multitude of radio stars. A power rocket with extra fuel was the only instrument that could return the space station to its normal orbit.

That rocket must come from

White Sands.

White Sands did not answer.

He tried again, turned as an exclamation of dismay burst from the astronomer. Morrow bent to look at the plotting board.

Jones had sketched a circle of the Earth, placing it in the heart of the ellipse the space station was drawing around it.

From 9600 miles out, the line curved down and down, and down . . .

But it did not meet the point where the station had departed from its orbit 500 miles above Earth's surface.

The line came down and around to kiss the Earth—almost.

"I hope it's wrong," Jones said huskily. "If I'm right, we'll come in 87 miles above the surface."

"It can't!" Morrow shouted in frustration. "We'll hit stratosphere. It'll burn us—just long enough so we'll feel the agony before we die."

Jones rechecked his figures and shook his head. The line was still the same. Each 10 seconds it was supported by a new radar range. The astronomer's lightning fingers worked out a new problem.

"We have about 75 minutes to do something about it," he said. "We'll be over the Atlantic or England when it happens."

"Station I, this is . . ."

The beautiful, wonderful voice burst loud and clear from the radio and then vanished in a blurb of static.

"Oh God!" Kevin breathed. It was a prayer.

"We hear you," he shouted, procedure gone with the desperate need to communicate with home. "Come in White Sands. Please come in!"

Faintly now the voice blurred in and out, lost altogether for vital moments:

". . . your plot. Altiac computor . . . your orbit . . . rocket on standby . . . as you pass."

"Yes!" Kevin shouted, gripping the short wave set with white fingers, trying to project his words into the microphone, across the dwindling thousands of miles of space. "Yes. Send the rocket!"

"Can they do it?" Jones asked. "The rocket, I mean."

"I don't know," Kevin said. "They're all pre-set, mass produced now, and fuel is adjusted to come into the old orbit. They can be rigged, I think, if there's enough time."

The coast of California loomed below them now, a brown fringe holding back the dazzling flood of the Pacific. They were 3000 miles above the Earth, dropping sharply on the down leg of the ellipse.

At their present speed, the station appeared to be plunging directly at the Earth. The globe was frighteningly larger each time it wobbled across the viewport.

"Shall I call away the tugmen?" Bert asked tensely.

"I can't ask them to do it," Kevin said. "With this crazy orbit, it's too dangerous. I'm going out."

He slipped into his space gear.

"I'm going with you," Bert said. Kevin smiled his gratitude.

In the airlock the men armed themselves with three heavy rocket

pistols each. Morrow ordered other tugmen into suits for standby.

"I wish I could do this alone, Bert," he said soberly. "But I'm glad you're coming along. If we miss, there won't be a second chance.

They knew approximately when they would pass over the rocket launching base, but this time it would be different. The space station would pass at 750 miles altitude and with a new velocity. No one could be sure the feeder rocket would make it. Unless maximum fuel had been adjusted carefully, it might orbit out of reach below them. Rescue fuel would take the place of a pilot.

ANDERSON AND Morrow floated clear of the huge wheel, turning lazily in the deceptive luxury of zero gravity. The familiar sensation of exhilaration threatened to wipe out the urgency they must bring to bear on their lone chance for survival. They could see the jagged hole where the Moonbeam had yanked out a section of the structure.

An unintelligible buzz of voice murmured in the radios. Unconsciously Kevin tried to squeeze the earphones against his ears, but his heavily-gloved hands met only the rigid globe of his helmet.

"You get it, Bert?"

"No."

"This is Jones," a new voice loud and clear. "Earth says 15 seconds to blastoff."

"Rocket away!"

Like a tiny, clear bell the words emerged from static. Bert and Kevin gyrated their bodies so they could stare directly at the passing panorama of Earth below. They had seen it hundreds of times, but now 250 more miles of altitude gave the illusion they were studying a familiar landmark through the small end of a telescope.

"There it is!" Bert shouted.

A pinpoint of flame, that was it, with no apparent motion as it rose almost vertically toward them.

Then a black dot in an infinitesimal circle of flame—the rocket silhouetted against its own fire . . . as big as a dime . . . as big as a dollar . . .

. . . as big as a basketball, the circle of flame soared up toward them.

"It's still firing!" Kevin yelled. "It'll overshoot us."

As he spoke, the fire died, but the tiny bar of the rocket, black against the luminous surface of Earth, crawled rapidly up into their sector of starlit blackness. Then it was above Earth's horizon, nearly to the space station's orbit, crawling slowly along, almost to them—a beautiful long cylinder of metal, symbol of home and a civilization sending power to help them to safety.

Hope flashed through Kevin's mind that he was wrong, that the giant computor and the careful hands of technicians had matched the ship to their orbit after all.

But he was right. It passed them, angling slowly upward not 50 yards away.

Instantly the two men rode the rocket blast of their pistols to the

nose of the huge projectile. But it carried velocity imparted by rockets that had fired a fraction of a minute too long.

Clinging to the metal with magnetic shoes, Morrow and Anderson pressed the triggers of the pistols, held them down, trying to push the cylinder down and back.

Bert's heavy breathing rasped in the radio as he unconsciously used the futile force of his muscles in the agonizing effort to move the ship.

Their pistols gave out almost simultaneously. Both reached for another. Thin streams of propulsive gas altered the course of the rocket, slightly, but the space station was smaller now, angling imperceptibly away and down as the rocket pressed outward into a new, higher orbit.

The rocket pistols were not enough.

"Get the hell back here!" Jones' voice blared in their ears. "You can't do it. You're 20 miles away now and angling up. Don't be dead heroes!" The last words were high and frantic.

"We've got to!" Morrow answered. "There's no other way."

"We can't do the impossible, chief," Bert gasped.

A group of tiny figures broke away from the rim of the space station. The tugmen were coming to help.

Then Kevin grasped the hideous truth. There were not enough rocket pistols to bring the men to the full ship and return *with any reserve to guide the projectile.*

"Get back!' he shouted. "Save the pistols. We're coming in."

Behind them their only chance for life continued serenely upward into a new orbit. There, 900 miles above the earth, it would revolve forever with more fuel in its tanks than it needed.

Fuel that would have saved the lives of 90 desperate men.

By leaving it, Morrow and Anderson had bought perhaps 30 more minutes of life before the space station became a huge meteor riding its fiery path to death in the the upper reaches of the atmosphere.

Both suffered the guilt of enormous betrayal. The fact that they could have done no more did not erase it.

Frantically, Kevin flipped over in his mind the possible tools that still could be brought to bear to lift the space station above its flaming destruction. But his tools were the stone axe of a primitive man trying to hack his way out of a forest fire.

Eager hands pulled them back into the station. For a moment there were the reassuring sounds as their helmets were unscrewed. Then the familiar smells and shape of the structure that had been home for so long. Now that haven was about to destroy itself.

Then Morrow remembered the Earth rocket that had brought Senator McKelvie to the great white sausage in space.

That rocket still contained a small quantity of fuel.

If fired at the precise moment, that fuel, anchored with the rocket in the hub socket, might be enough

to lift the entire station.

He shouted instructions and men raced to obey. Kevin, himself, raced into the nearest tube. There was no sound, but ahead of him the hatch was open to the discharge chamber. He leaped into the zero gravity room.

McKelvie was crawling through the connecting port into the feeder rocket. Kevin sprawled headlong into Gordon. The recoil threw them apart, but Gordon recovered balance first.

He had a gun.

"Get back," he snarled. "We're going down." He laughed sharply, near hysteria. "We're going down to tell the world how you fried—through error and mismanagement."

"You messed up those lines," Kevin said. It didn't matter now. He only hoped to hold Gordon long enough for diversionary help to come out of the tube.

"Yes," Gordon leered. "We fixed the lines. The senator wasn't sure we should, but I helped him over his squeamishness, and now we'll crack the whip when we get back home."

"You won't make it," Kevin said. "We're still more than 600 miles high. The glide pattern in that rocket is built to take you down from 500 miles."

McKelvie's head appeared in the hatch. He was desperately afraid.

"You said you could fly this thing, Gordon. Can you?"

Max nodded his head rapidly, like a schoolboy asked to recite a lesson he has not studied.

Kevin was against the bulkhead. Now he pushed himself slowly forward.

"Stay back or I'll shoot!" Gordon screamed. Instead, he leaped backward through the hatch.

Hampered by his original slow motion, Kevin could not move faster until he reached another solid surface.

The hatch slammed shut before his grasping fingers touched it.

A wrenching tug jostled the space station structure. The rocket was gone, and with it the power that might have saved all of them.

Morrow ran again. He had not stopped running since the beginning of this nightmare.

He tumbled over Bert and Jones in the tube. They scrambled after him back to the control room. The three men watched through the port.

"If he doesn't hit the atmosphere too quick, too hard . . ." Kevin whispered. His fists were clenched. He felt no malice at this moment. He did not wish them death. There was no sound in the radio. The plummeting projectile was a tiny black dot, vanishing below and behind them.

When the end came, it was a mote of orange red, then a dazzling smear of white fire as the rocket ripped into the atmosphere at nearly 20,000 miles an hour.

"They're dead!" Jones voice choked with disbelief. Kevin nodded, but it was a flashing thing that lost meaning for him in the same instant. He knew that unless a miracle happened, ninety men in his command would meet the same fate.

LIKE A perpetual motion machine, his brain kept reaching for something that could save his space station, his own people, the iron-nerved spacemen who knew they were near death but kept their vital posts, waiting for him to find a way.

Stories do not end unhappily—that thought kept cluttering his brain—a muddy optimism blanking out vital things that might be done.

"What's the altitude Jones?"

"520 now. Leveling a bit."

"Enough?" It was a stupid question and Kevin knew it. Jones shook his head.

"We might be lucky," he said. "We'll hit it about 97 miles up. The top isn't a smooth surface, it billows and dips. But," he added, almost a whisper, "we'll penetrate to about 80 miles before . . ."

"How much time?" Kevin asked sharply. A tiny chain of hope linked feebly.

"About 22 minutes."

"Bert, order all hands into space suits—emergency!"

While the order was being carried out, Kevin summoned the tugmen.

"How many loaded pistols do we have?"

"Six," the chief answered.

"All right. Get this quick. Anchor yourselves inside the hub. Aim those pistols at the Earth and fire until they're exhausted."

The chief stared incredulously.

"I know it's crazy," Kevin snapped. "It's not enough, but if it alters our orbit 50 feet, it'll help." The tugmen ran out. Bert, Kevin and Jones scrambled into space suits. Morrow called for reports.

"All hands," he intoned steadily, "open all ports. Repeat. Open all ports. Do not question. Follow directions closely."

Ten seconds later, a whoosh of escaping air signaled obedience.

"Now!" Kevin shouted, "grab every loose object within reach. Throw it at the Earth. Desks, books, tools, anything. Throw them down with every ounce of strength you've got!"

It was insane. Everything was insane. It couldn't possibly be enough . . . But space around the hurtling station blossomed with every conceivable flying object that man has ever taken with him to a lonely outpost. A pair of shoes went tumbling into darkness, and behind it the plastic framed photograph of someone's wife and children.

Jones knew his superior had not gone berserk. He bent anxiously over the radar scope.

It was not a matter of jettisoning weight. Every action has an equal reaction, and the force each man gave to a thrown object was as effective in its diminuitive way as the exhaust from a rocket.

"Read it!" Morrow shouted. "Read it!"

"265 miles," Jones cried. "I need more readings to tell if it helped."

There was no sound in the radio circuit, save that of 90 men breathing, waiting to hear 90 death sentences. Jones' heavily-gloved hands moved the pencil clumsily over the graph paper. He drew a tangent to a new curve.

"It helped," he said tonelessly, "We'll go in at 100 miles, pene-

trate to 90 . . ."

"Not enough," Kevin said. "Close all ports. Repeat. Close all ports!"

An unheard sigh breathed through the mammoth, complex doughnut as automatic machinery gave new breath to airless spaces.

It might never be needed again to sustain human life.

But the presence of air delivered one final hope to Morrow's frantic brain.

"Two three oh miles," Jones said.

"Air control," Kevin barked into the mike, "how much pressure can you get in 15 minutes?"

"Air control, aye," came the answer, and a pause while the chief calculated. "About 50 pounds with everything on the line."

"Get it on! And hang on to your hats," Kevin yelled.

The station dropped another 30 miles, slanting in sharply toward the planet's envelope of gas that could sustain life—or take it away. Morrow turned to Anderson.

"Bert. There are four tubes leading into the hub. Get men and open the outer airlocks. Then standby the four inner locks. When I give the signal, open those locks, fast. You may have to pull to help the machinery—you'll be fighting three times normal air pressure."

Bert ran out. Nothing now but to wait. Five minutes passed. Ten.

"We're at 135 miles," Jones said. Far below the Earth wheeled by, its apparent motion exaggerated as the space station swooped lower.

"120 miles."

Kevin's throat was parched, his lips dry. Increasing air pressure squeezed the space suits tighter around his flesh. A horror of claustrophobia gripped him and he knew every man was suffering the same torture.

"110 miles."

"Almost there," Bert breathed, unaware that his words were audible.

Then a new force gripped them, at first the touch of a caressing finger tip dragging back, ever so slightly. Kevin staggered as inertia tugged him forward.

"We're in the air!" he shouted. "Bert. Standby the airlocks!"

"Airlocks ready!"

The finger was a hand, now, a huge hand of tenuous gases, pressing, pressing, but the station still ripped through its death medium at a staggering 20,000 miles an hour.

Jones pointed. Morrow's eyes followed his indicating finger to the thermocouple dial.

The dial said 100° F. While he watched it moved to 105, quickly to 110°.

Five seconds more. A blinding pain of tension stabbed Kevin behind the eyes. But through the flashing colors of agony, he counted, slowly, deliberately . . .

"Now!" he shouted. "Open airlocks, Bert. NOW!"

Air rushed out through the converging spokes of the great wheel, poured out under tremendous pressure, into the open cup of the space station hub, and there the force of three atmospheres spurted into space through the mammoth improvised rocket nozzle.

Kevin felt the motion. Every man of the crew felt the surge as the

intricate mass of metal and nylon leaped upward.

That was all.

Morrow watched the temperature gauge. It climbed to 135°, to 140° . . . 145 . . . 150 . . .

"The temperature is at 150 degrees," he announced huskily over the radio circuit. "If it goes higher, there's nothing we can do."

The needle quivered at 151, moved to 152, and held . . .

Two minutes, three . . .

The needle stepped back, one degree.

"We're moving out," Kevin whispered. "We're moving out!"

The cheer, then, was a ringing, deafening roar in the earphones. Jones thumped Kevin madly on the back and leaped in a grotesque dance of joy.

MORROW LEANED back in the control chair, pressed tired fingers to his temples. He could not remember when he had slept.

The first rocket from White Sands had brought power to adjust the orbit. This one was on the mark.

The next three brought the Senate investigating committee.

But that didn't matter, really. Kevin was happy, and he was waiting.

The control room door banged open. Mark Kramer's grin was like a flash of warm sunlight.

"Hi, commander," he said, "wait'll you see the marvelous pictures I got."

Outside the Moonbeam rode gently at anchor, tethered with new safety lines. • • •

COMING—IN THE DECEMBER ISSUE!

TO BRING YOU a wider and more exciting view of the world of science fiction, we are happy to announce that, beginning with the December issue of IF, we will present a special department by none other than "Mr. Science Fiction" himself—Forrest Ackerman, who probably knows more about what is happening in science fiction than any other person in the world today. His column will include news and views of science fiction movies, books, personalities, events and other items from all over the world.

A resident of Los Angeles, he covers Hollywood and every production of a science fiction film. Surrounded by thousands of volumes of books and tons of magazines, he knows the past and present of everything that's printed. Host and traveler, he has met and entertained writers, producers, scientists, artists and others who are connected with science fiction. He hasn't missed a national convention since he was old enough to crawl, so he knows those too!

So—don't you miss his entertaining and informative new department in the December IF!

BY CHARLES BEAUMONT

LAST RITES

Illustrated by Paul Orban

What can a priest do when he's faced with such a dilemma—one which requires him to gainsay the very foundations of the faith which he represents?

SOMEWHERE IN the church a baby was shrieking. Father Courtney listened to it, and sighed, and made the Sign of the Cross. Another battle, he thought, dismally. Another grand tug of war. And who won this time, Lord? Me? Or that squalling infant, bless its innocence?

"In the Name of the Father, and of the Son, and of the Holy Ghost. Amen."

He turned and made his way down the pulpit steps, and told himself, Well, you ought to be used to it by now, Heaven knows. After all, you're a priest, not a monologist. What do you care about "audience reaction"? And besides, who ever listens to these sermons of yours, anyway—even under the best of conditions? A few of the ladies in the parish (though you're sure they never hear or understand a word), and, of course, Donovan. But who else?

Screech away, little pink child! Screech until you—no.

No, no. Ahhh!

He walked through the sacristy, trying not to think of Donovan, or the big city churches with their fine nurseries, and sound-proof walls, and amplifiers that amplified . . .

One had what one had: It was God's will.

And were things really so bad? Here there was the smell of forests, wasn't there? And in what city parish could you see wild flowers growing on the hills like bright lava? Or feel the earth breathing?

He opened the door and stepped outside.

The fields were dark-silver and silent. Far above the fields, up near the clouds, a rocket launch moved swiftly, dragging its slow thunder behind it.

Father Courtney blinked.

Of course things were not so bad. Things would be just fine, he thought, and I would not be nervous and annoyed at little children, if only—

Abruptly he put his hands together. "Father," he whispered, "let him be well. Let that be Your will!"

Then, deciding not to wait to greet the people, he wiped his palms with a handkerchief and started for the rectory.

The morning was very cold. A thin film of dew coated each pebble along the path, and made them all glisten like drops of mercury. Father Courtney looked at the pebbles and thought of other walks down this path, which led through a wood to Hidden River, and of himself laughing; of excellent wine and soft cushions and himself arguing, arguing; of a thousand sweet hours in the past.

He walked and thought these things and did not hear the telephone until he had reached the rectory stairs.

A chill passed over him, unaccountably.

He went inside and pressed a yellow switch. The screen blurred, came into focus. The face of an old man appeared, filling the screen.

"Hello, Father."

"George!" The priest smiled and waved his fist, menacingly. "George, why haven't you contacted me?" He sputtered. "Aren't you out of

that bed yet?"

"Not yet, Father."

"Well, I expected it, I knew it. *Now* will you let me call a doctor?"

"No—" The old man in the screen shook his head. He was thin and pale. His hair was profuse, but very white, and there was something in his eyes. "I think I'd like you to come over, if you could."

"I shouldn't," the priest said, "after the way you've been treating all of us. But, if there's still some of that Chianti left . . ."

George Donovan nodded. "Could you come right away?"

"Father Yoshida won't be happy about it."

"Please. Right away."

Father Courtney felt his fingers draw into fists. "Why?" he asked, holding onto the conversational tone. "Is anything the matter?"

"Not really," Donovan said. His smile was brief. "It's just that I'm dying."

"And I'm going to call Doctor Ferguson. Don't give me any argument, either. This nonsense has gone far—"

The old man's face knotted. "No," he said, loudly. "I forbid you to do that."

"But you're ill, man. For all we know, you're *seriously* ill. And if you think I'm going to stand around and watch you work yourself into the hospital just because you happen to dislike doctors, you're crazy."

"Father, listen—*please*. I have my reasons. You don't understand them, and I don't blame you. But you've got to trust me. I'll explain everything, if you'll promise me you won't call *anyone*."

Father Courtney breathed unsteadily; he studied his friend's face. Then he said, "I'll promise this much. I won't contact a doctor until I've seen you."

"Good." The old man seemed to relax.

"I'll be there in fifteen minutes."

"With your Little Black Bag?"

"Certainly not. You're going to be all right."

"Bring it, Father. Please. Just in case."

The screen blurred and danced and went white.

Father Courtney hesitated at the blank telephone.

Then he walked to a table and raised his fists and brought them down hard, once.

You're going to get well, he thought. It isn't going to be too late.

Because if you are dying, if you really are, and I could have prevented it . . .

He went to the closet and drew on his overcoat.

It was thick and heavy, but it did not warm him. As he returned to the sacristy he shivered and thought that he had never been so cold before in all his life.

THE HELICAR whirred and dropped quickly to the ground. Father Courtney removed the ignition key, pocketed it, and thrust his bulk out the narrow door, wheezing.

A dull rumbling sifted down from the sky. The wake of fleets a mile away, ten miles, a hundred.

It's raining whales in our back-yard, the priest thought, remembering how Donovan had described the sound once to a little girl.

A freshet of autumn leaves burst against his leg, softly, and for a while he stood listening to the rockets' dying rumble, watching the shapes of gold and red that scattered in the wind, like fire.

Then he whispered, "Let it be Your will," and pushed the picket gate.

The front door of the house was open.

He walked in, through the living-room, to the study.

"George."

"In here," a voice answered.

He moved to the bedroom, and twisted the knob.

George Donovan lay propped on a cloudbank of pillows, his thin face white as the linen. He was smiling.

"I'm glad to see you, Father," he said, quietly.

The priest's heart expanded and shrank and began to thump in his chest.

"The Chianti's down here in the night-table," Donovan gestured. "Pour some: morning's a good enough time for a dinner wine."

"Not now, George."

"Please. It will help."

Father Courtney pulled out the drawer and removed the half-empty bottle. He got a glass from the bookshelf, filled it. Dutifully, according to ritual, he asked, "For you?"

"No," Donovan said. "Thank you all the same." He turned his head. "Sit over there, Father, where I can see you."

The priest frowned. He noticed that Donovan's arms were perfectly flat against the blanket, that his body was rigid, outlined beneath the covering. No part of the old man moved except the head, and that slowly, unnaturally.

"That's better. But take off your coat—it's terribly hot in here. You'll catch pneumonia."

The room was full of cold winds from the open shutters.

Father Courtney removed his coat.

"You've been worried, haven't you?" Donovan asked.

The priest nodded. He tried to sense what was wrong, to smell the disease, if there was a disease, if there was anything.

"I'm sorry about that." The old man seemed to sigh. His eyes were misted, webbed with distance, lightly. "But I wanted to be alone. Sometimes you have to be alone, to think, to get things straight. Isn't that true?"

"Sometimes, I suppose, but—"

"No. I know what you're going to say, the questions you want to ask. But there's not enough time . . ."

Father Courtney arose from the chair, and walked quickly to the telephone extension. He jabbed a button. "I'm sorry, George," he said, "but you're going to have a doctor."

The screen did not flicker.

He pressed the button again, firmly.

"Sit down," the tired voice whispered. "It doesn't work. I pulled the wires ten minutes ago."

"Then I'll fly over to Milburn—"

"If you do, I'll be dead when you get back. Believe that: I know what I'm talking about."

The priest clenched and unclenched his stubby fingers, and sat down in the chair again.

Donovan chuckled. "Drink up," he said. "We can't have good wine going to waste, can we?"

The priest put the glass to his lips. He tried to think clearly. If he rushed out to Milburn and got Doctor Ferguson, perhaps there'd be a chance. Or—He took a deep swallow.

No. That wouldn't do. It might take hours.

Donovan was talking now; the words lost—a hum of locusts in the room, a far-off murmuring; then, like a radio turned up: "Father, how long have we been friends, you and I?"

"Why . . . twenty years," the priest answered. "Or more."

"Would you say you know me very well by now?"

"I believe so."

"Then tell me first, right now, would you say that I've been a good man?"

Father Courtney smiled. "There've been worse," he said, and thought of what this man had accomplished in Mount Vernon, quietly, in his own quiet way, over the years. The building of a decent school for the children—Donovan had shamed the people into it. The new hospital—Donovan's doing, his patient campaigning. Entertainment halls for the young; a city fund for the poor; better teachers, better doctors—all, all because of the old man with the soft voice, George Donovan.

"Do you mean it?"

"Don't be foolish. And don't be treacly, either. Of course I mean it."

In the room, now, a strange odor fumed up, suddenly.

The old man said, "I'm glad." Still he did not move. "But, I'm sorry I asked. It was unfair."

"I don't have the slightest idea what you're talking about."

"Neither do I, Father, completely. I thought I did, once, but I was wrong."

The priest slapped his knees, angrily. "Why won't you let me get a doctor? We'll have plenty of time to talk afterwards."

Donovan's eyes narrowed, and curved into what resembled a smile. "You're my doctor," he said. "The only one who can help me now."

"In what way?"

"By making a decision." The voice was reedy: it seemed to waver and change pitch.

"What sort of a decision?"

Donovan's head jerked up. He closed his eyes and remained this way for a full minute, while the acrid smell bellied and grew stronger and whorled about the room in invisible currents.

"'. . . the gentleman lay graveward with his furies . . .' Do you remember that, Father?"

"Yes," the priest said. "Thomas, isn't it?"

"Thomas. He's been here with me, you know, really; and I've been asking him things. On the theory that poets aren't entirely human.

But he just grins. 'You're dying of strangers,' he says; and grins. Bless him." The old man lowered his head. "He disappointed me."

Father Courtney reached for a cigarette, crumpled the empty pack, laced and unlaced his fingers. He waited, remembering the times he had come to this house, all the fine evenings. Ending now?

Yes. Whatever else he would learn, he knew that, suddenly: they were ending.

"What sort of a decision, George?"

"A theological sort."

Father Courtney snorted and walked to a window. Outside, the sun was hidden behind a curtain of gray. Birds sat black and still on the telephone lines, like notes of music; and there was rain.

"Is there something you think you haven't told me?" he asked.

"Yes."

"About yourself?"

"Yes."

"I don't think so, George." Father Courtney turned. "I've known about it for a long time."

The old man tried to speak.

"I've known very well. And now I think I understand why you've refused to see anyone."

"No," Donovan said. "You don't. Father, listen to me: it isn't what you think."

"Nonsense." The priest reverted to his usual gruffness. "We've been friends for too many years for this kind of thing. It's *exactly* what I think. You're an intelligent, well-read, mule-stubborn old man who's worried he won't get to Heaven because sometimes he has doubts."

"That isn't—"

"Well, rubbish! Do you think I don't ask questions, myself, once in a while? Just because I'm a priest, do you think I go blindly on, never wondering, not even for a minute?"

The old man's eyes moved swiftly, up and down.

"Every intelligent person doubts, George, once in a while. And we all feel terrible about it, and we're terribly sorry. But I assure you, if this were enough to damn us, Heaven would be a wilderness." Father Courtney reached again for a cigarette. "So you've shut yourself up like a hermit and worried and stewed and endangered your life, and all for nothing." He coughed. "Well, that's it, isn't it?"

"I wish it were," Donovan said, sadly. His eyes kept dancing. There was a long pause; then he said, "Let me pose you a theoretical problem, Father. Something I've been thinking about lately."

Father Courtney recalled the sentence, and how many times it had begun the evenings of talk—wonderful talk! These evenings, he realized, were part of his life now. An important part. For there was no one else, no one of Donovan's intelligence, with whom you could argue any subject under the sun—from Frescobaldi to baseball, from Colonization on Mars to the early French symbolists, to agrarian reforms, to wines, to theology . . .

The old man shifted in the bed. As he did, the acrid odor diminished and swelled and pulsed. "You once told me," he said, "that you

read imaginative fiction, didn't you?"

"I suppose so."

"And that there were certain concepts you could swallow—such as parallel worlds, mutated humans, and the like—, but that other concepts you couldn't swallow at all. Artificial life, I believe you mentioned, and time travel, and a few others."

The priest nodded.

"Well, let's take one of these themes for our problem. Will you do that? Let's take the first idea."

"All right. Then the doctor."

"We have this man, Father," Donovan said, gazing at the ceiling. "He looks perfectly ordinary, you see, and it would occur to no one to doubt this; but he is not ordinary. Strictly speaking, he isn't even a man. For, though he lives, he isn't alive. You follow? He is a thing of wires and coils and magic, a creation of other men. He is a machine . . ."

"George!" The priest shook his head. "We've gone through this before: it's foolish to waste time. I came here to help you, not to engage in a discussion of science fiction themes!"

"But that's how you *can* help me," Donovan said.

"Very well," the priest sighed. "But you know my views on this. Even if there were a logical purpose to which such a creature might be put—and I can't think of any—I still say they will never create a machine that is capable of abstract thought. Human intelligence is a spiritual thing—and spiritual things can't be duplicated by men."

"You really believe that?"

"Of course I do. Extrapolation of known scientific advances is perfectly all right; but this is something else entirely."

"Is it?" the old man said. "What about Pasteur's discovery? Or the X-Ray? Did Roentgen correlate a lot of embryonic data, Father, or did he come upon something brand new? What do you think even the scientists themselves would have said to the idea of a machine that would see through human tissue? They would have said, It's fantastic. And it was, too, and is. Nevertheless, it exists."

"It's not the same thing."

"No . . . I suppose that's true. However, I'm not trying to convince you of my thesis. I ask merely that you accept it for the sake of the problem. Will you?"

"Go ahead, George."

"We have this man, then. He's artificial, but he's perfect: great pains have been taken to see to this. Perfect, no detail spared, however small. He looks human, and he acts human, and for all the world knows, he *is* human. In fact, sometimes even he, our man, gets confused. When he feels a pain in his heart, for instance, its difficult for him to remember that he has no heart. When he sleeps and awakes refreshed, he must remind himself that this is all controlled by an automatic switch somewhere inside his brain, and that he doesn't *actually* feel refreshed. He must think, I'm not real, I'm not real, I'm not real!

"But this becomes impossible, after a while. Because he doesn't believe it. He begins to ask, Why?

Why am I not real? Where is the difference, when you come right down to it? Humans eat and sleep —as I do. They talk—as I do. They move and work and laugh—as I do. What they think, I think, and what they feel, I feel. Don't I?

"He wonders, this mechanical man does, Father, what would happen if all the people on earth were suddenly to discover they were mechanical also. Would they feel any the less human? Is it likely that they would rush off to woo typewriters and adding machines? Or would they think, perhaps, of revising their definition of the word, 'Life'?

"Well, our man thinks about it, and thinks about it, but he never reaches a conclusion. He doesn't believe he's nothing more than an advanced calculator, but he doesn't really believe he's human, either: not completely.

"All he knows is that the smell of wet grass is a fine smell to him, and that the sound of the wind blowing through trees is very sad and very beautiful, and that he loves the whole earth with an impossible passion . . ."

Father Courtney shifted uncomfortably in his chair. If only the telephone worked, he thought. Or if he could be sure it was safe to leave.

". . . other men made the creature, as I've said; but many more like him were made. However, of them all, let's say only he was successful."

"Why?" the priest asked, irritably. "Why would this be done in the first place?"

Donovan smiled. "Why did we send the first ship to the moon? Or bother to split the atom? For no very good reason, Father. Except the reason behind all of science: Curiosity. My theoretical scientists were curious to see if it could be accomplished, that's all."

The priest shrugged.

"But perhaps I'd better give our man a history. That would make it a bit more logical. All right, he was born a hundred years ago, roughly. A privately owned industrial monopoly was his mother, and a dozen or so assorted technicians his father. He sprang from his electronic womb fully formed. But, as the result of an accident—lack of knowledge, what have you—he came out rather different from his unsuccessful brothers. A mutant! A mutated robot, Father—now there's an idea that ought to appeal to you! Anyway, *he* knew who, or what, he was. He remembered. And so—to make it brief—when the war interrupted the experiment and threw things into a general uproar, our man decided to escape. He wanted his individuality. He wanted to get out of the zoo.

"It wasn't particularly easy, but he did this. Once free, of course, it was impossible to find him. For one thing, he had been constructed along almost painfully ordinary lines. And for another, they couldn't very well release the information that a mechanical man built by their laboratories was wandering the streets. It would cause a panic. And there was enough panic, what with the nerve gas and the bombs."

"So they never found him, I gather."

"No," Donovan said, wistfully.

"They never found him. And they kept their secret well: it died when they died."

"And what happened to the creature?"

"Very little, to tell the truth. They'd given him a decent intelligence, you see—far more decent, and complex, than they knew—so he didn't have much trouble finding small jobs. A rather old-looking man, fairly strong—he made out. Needless to say, he couldn't stay in the same town for more than twenty years or so, because of his inability to age, but this was all right. Everyone makes friends and loses them. He got used to it."

Father Courtney sat very still now. The birds had flown away from the telephone lines, and were at the window, beating their wings, and crying harshly.

"But all this time, he's been thinking, Father. Thinking and reading. He makes quite a study of philosophy, and for a time he favors a somewhat peculiar combination of Russell and Schopenhauer—unbitter bitterness, you might say. Then this phase passes, and he begins to search through the vast theological and metaphysical literature. For what? He isn't sure. However, he is sure of one thing, now: He *is*, indubitably, human. Without breath, without heart, without blood or bone, artificially created, he thinks this and believes it, with a fair amount of firmness, too. Isn't that remarkable!"

"It is indeed," the priest said, his throat oddly tight and dry. "Go on."

"Well," Donovan chuckled, "I've caught your interest, have I? All right, then. Let us imagine that one hundred years have passed. The creature has been able to make minor repairs on himself, but—at last—he is dying. Like an ancient motor, he's gone on running year after year, until he's all paste and hairpins, and now, like the motor, he's falling apart. And nothing and no one can save him."

The acrid aroma burned and fumed.

"Here's the real paradox, though. Our man has become religious, Father! He doesn't have a living cell within him, yet he's concerned about his soul!"

Donovan's eyes quieted, as the rest of him did. "The problem," he said, "is this: Having lived creditably for over a century as a member of the human species, can this creature of ours hope for Heaven? Or will he 'die' and become only a heap of metal cogs?"

Father Courtney leapt from the chair, and moved to the bed. "George, in Heaven's name, let me call Doctor Ferguson!"

"Answer the question first. Or haven't you decided?"

"There's nothing to decide," the priest said, with impatience. "It's a preposterous idea. No machine can have a soul."

Donovan made the sighing sound, through closed lips. He said, "You don't think it's conceivable, then, that God could have made an exception here?"

"What do you mean?"

"That He could have taken pity on this theoretical man of ours, and breathed a soul into him after all?

Is that so impossible?"

Father Courtney shrugged. "It's a poor word, impossible," he said. "But it's a poor problem, too. Why not ask me whether pigs ought to be allowed to fly?"

"Then you admit it's conceivable?"

"I admit nothing of the kind. It simply isn't the sort of question any man can answer."

"Not even a priest?"

"Especially not a priest. You know as much about Catholicism as I do, George; you ought to know how absurd the proposition is."

"Yes," Donovan said. His eyes were closed.

Father Courtney remembered the time they had argued furiously on what would happen if you went back in time and killed your own grandfather. This was like that argument. Exactly like it—exactly. It was no stranger than a dozen other discussions (What if Mozart had been a writer instead of a composer? If a person died and remained dead for an hour and were then revived, would he be haunted by his own ghost?) Plus, perhaps, the fact that Donovan might be in a fever. Perhaps and might and why do I sit here while his life may be draining away . . .

The old man made a sharp noise. "But you can tell me this much," he said. "If our theoretical man were dying, and you knew that he was dying, would you give him Extreme Unction?"

"George, you're delirious."

"No, I'm not: please, Father! Would you give this creature the Last Rites? If, say, you knew him? If you'd known him for years, as a friend, as a member of the parish?"

The priest shook his head. "It would be sacriligious."

"But why? You said yourself that he might have a soul, that God might have granted him this. Didn't you say that?"

"I—"

"Father, remember, he's a friend of yours. You know him *well.* You and he, this creature, have worked together, side by side, for years. You've taken a thousand walks together, shared the same interests, the same love of art and knowledge. For the sake of the thesis, Father. Do you understand?"

"No," the priest said, feeling a chill freeze into him. "No, I don't."

"Just answer this, then. If your friend were suddenly to reveal himself to you as a machine, and he was dying, and wanted very much to go to Heaven—what would you do?"

The priest picked up the wine glass and emptied it. He noticed that his hand was trembling. "Why—" he began, and stopped, and looked at the silent old man in the bed, studying the face, searching for madness, for death.

"What would you do?"

An unsummoned image flashed through his mind. Donovan, kneeling at the altar for Communion, Sunday after Sunday; Donovan, with his mouth firmly shut, while the others' yawned; Donovan, waiting to the last moment, then snatching the Host, quickly, dartingly, like a lizard gobbling a fly.

Had he ever seen Donovan eat?

Had he seen him take even one glass of wine, ever?

Father Courtney shuddered slightly, brushing away the images. He felt unwell. He wished the birds would go elsewhere.

Well, answer him, he thought. *Give him an answer. Then get in the helicar and fly to Milburn and pray it's not too late . . .*

"I think," the priest said, "that in such a case, I would administer Extreme Unction."

"Just as a precautionary measure?"

"It's all very ridiculous, but—I think that's what I'd do. Does that answer the question?"

"It does, Father. It does." Donovan's voice came from nowhere. "There is one last point, then I'm finished with my little thesis."

"Yes?"

"Let us say the man dies and you give him Extreme Unction; he does or does not go to Heaven, provided there is a Heaven. What happens to the body? Do you tell the townspeople they have been living with a mechanical monster all these years?"

"What do you think, George?"

"I think it would be unwise. They remember our theoretical man as a friend, you see. The shock would be terrible. Also, they would never believe he was the only one of his kind: they'd begin to suspect their neighbors of having clockwork interiors. And some of them might be tempted to investigate and see for sure. And, too, the news would be bound to spread, all over the world. I think it would be a bad thing to let anyone know, Father."

"How would I be able to suppress it?" the priest heard himself ask, seriously.

"By conducting a private autopsy, so to speak. Then, afterwards, you could take the parts to a junkyard and scatter them."

Donovan's voice dropped to a whisper. Again the locust hum.

". . . and if our monster had left a note to the effect he had moved to some unspecified place, you . . ."

The acrid smell billowed, all at once, like a steam, a hiss of blinding vapor.

"George."

Donovan lay unstirring on the cloud of linen, his face composed, expressionless.

"George!"

The priest reached his hand under the blanket and touched the heart-area of Donovan's chest. He tried to pull the eyelids up: they would not move.

He blinked away the burning wetness. "Forgive me!" he said, and paused, and took from his pocket a small white jar and a white stole.

He spoke softly, under his breath, in Latin. While he spoke, he touched the old man's feet and head with glistening fingertips.

Then, when many minutes had passed, he raised his head.

Rain sounded in the room, and swift winds, and far-off rockets.

Father Courtney grasped the edge of the blanket.

He made the Sign of the Cross, breathed, and pulled downward, slowly.

After a long while he opened his eyes. • • •

An executive job was no longer important, not with the Union holding the stock. But a smart vice-president knows more than machines and production—he knows people

Meeting of the Board

BY ALAN E. NOURSE

IT WAS going to be a bad day. As he pushed his way nervously through the crowds toward the Exit Strip, Walter Towne turned the dismal prospect over and over in his mind. The potential gloominess of this particular day had descended upon him the instant the morning buzzer had gone off, making it even easier than usual to just roll over and forget about it all—until the water-douse came twenty minutes later to drag him, drenched and gurgling, back to the cruel cold world. He had wolfed down his morning Koffee-Kup with one eye on the clock and one eye on his growing sense of impending crisis. And now, to make things just a trifle worse, he was going to be late again.

He struggled doggedly across the rumbling Exit Strip toward the Plant entrance. After all, he told himself, why should he be so upset? He *was* Vice President-In-Charge-Of-Production of the Robling Titanium Corporation. What could they do to him, really? He had rehearsed *his* part many times—squaring his thin shoulders, looking the Union Boss square in the eye and saying, "Now, see here, Torkleson—" But he knew, when the showdown came, that he wouldn't say any such thing. And this was the morning that the showdown would come.

Oh, not because of the *lateness*. Of course Bailey, the Shop Steward, would take his usual delight in bringing that up. But this seemed hardly worthy of concern this morning. The reports waiting on his desk were what worried him. The sales reports. The promotion-draw reports. The royalty reports. The anticipated dividend reports. Walter shook his head wearily. The Shop Steward was a goad, annoying, perhaps even infuriating, but tolerable. Torkleson was a different matter—

He pulled his worn overcoat down over frayed shirt-sleeves, and tried vainly to straighten the celluloid collar that kept scooting his tie up under his ear. Once off the moving Strip, he started up the Robling corridor toward the plant gate. Perhaps he would be fortunate. Maybe the reports would be late. Maybe his secretary's two neurones would fail to synapse this morning, and she'd lose them altogether. And, as long as he was dreaming, maybe Bailey would break his neck on the way to work this morning. He walked quickly past the Workers' Lounge, glancing in at the groups of men, arguing politics and checking the stock market reports before they changed from their neat grey business suits to their welding dungarees for the day. Running up the stairs to the Administrative Wing, he paused outside the door to punch the time clock. 8:04. Damn. If only Bailey could be sick—

Bailey was not sick. The Administrative Offices were humming with frantic activity as Walter glanced down the rows of cubby-hole offices. And in the middle of it all sat Bailey, in his black-and-yellow checkered tattersall, smoking a large cigar. His feet were planted on his desk top, but he hadn't started on his morning western novel yet. He was busy glaring, first at the clock, then at Walter.

"Late again, I see," the Shop Steward growled.

Walter gulped. "Yes, sir. Just four minutes, this time, sir. You know those crowded Strips—"

"So it's *just* four minutes now, eh?" Bailey's feet came down with a crash. "After last month's fine production record, you think four minutes doesn't matter, eh? Think just because you're a Vice President it's all right to mosey in here whenever you feel like it." He glowered. "Well, this is three times this month you've been late, Towne. That's a demerit for each time—and you know what that means."

"You wouldn't count four minutes as a whole demerit!"

Bailey grinned. "Wouldn't I, now! You just add up your pay envelope on Friday. Ten cents an hour off for each demerit—"

Walter sighed and shuffled back to his desk. Oh, well. It could have been worse. They might have fired him like poor Cartwright last month. He'd just *have* to listen to that morning buzzer . . .

The reports were on his desk. He picked them up warily. Maybe they wouldn't be so bad. He'd had more freedom this last month than before —maybe there'd been a policy change. Maybe Torkleson was gaining confidence in him. Maybe—

The reports were worse than he

had ever dreamed.

"Towne!"

Walter jumped a foot. Bailey was putting down the vidiphone receiver. His grin spread unpleasantly from ear to ear. "What have you been doing lately? Sabotaging the production line?"

"What's the trouble now?"

Bailey jerked a thumb significantly at the ceiling. "The Boss wants to see you. And you'd better have the right answers, too. The Boss seems to have a lot of questions."

Walter rose slowly from his seat. This was it, then. Torkleson had already seen the reports. He started for the door, his knees shaking.

It hadn't always been like this, he reflected miserably. Time was when things had been very different. It had *meant* something to be Vice President of a huge industrial firm like Robling Titanium. A man could have had a fine house of his own, and a 'copter-car, and belong to the Country Club—maybe even have a cottage on a lake somewhere—

Walter could almost remember those days with Robling, before the Switchover. Before that black day when the exchange of ten little shares of stock had thrown the Robling Titanium Corporation into the hands of strange and unnatural owners.

THE DOOR was of heavy stained oak, with bold letters edged in gold:

TITANIUM WORKERS OF AMERICA

Illustrated by Ed Emsh

Amalgamated Locals
Daniel P. Torkleson, Secretary

The secretary flipped down the desk switch and eyed Walter with pity. "Mr. Torkleson will see you."

Walter pushed through the door into the long, handsome office. For an instant he felt a pang of nostalgia—the floor-to-ceiling windows looking out across the long buildings of the Robling plant, the pine panelling, the broad expanse of desk—

"Well? Don't just stand there. Shut the door and come over here." The man behind the desk hoisted his three hundred well-dressed pounds and glared at Walter from under flagrant eyebrows. Torkleson's whole body quivered as he slammed a sheaf of papers down on the desk. "Just what do you think you're doing with this company, Towne?"

Walter swallowed. "I'm production manager of the corporation."

"And just what does the production manager *do* all day?"

Walter reddened. "He organizes the work of the plant, establishes production lines, works with Promotion and Sales, integrates Research and Development, operates the planning machines—"

"And you think you do a pretty good job of it, eh? Even asked for a raise last year!" Torkleson's voice was dangerous.

Walter spread his hands. "I do my best. I've been doing it for thirty years. I should know what I'm doing."

"Then how do you explain these reports?" Torkleson threw the heap of papers into Walter's arms, and paced up and down behind the desk. *"Look* at them! Sales at rock bottom. Receipts impossible. Big orders cancelled. The worst reports in seven years—and you say you know your job!"

"I've been doing everything I could," Walter snapped. "Of course the reports are bad—they couldn't help but be. We haven't met a production schedule in over two years. No plant can keep up production the way the men are working—"

Torkleson's face darkened. He leaned forward slowly. "So it's the *men* now, is it? Go ahead. Tell me what's wrong with the men."

"Nothing's wrong with the men—if they'd only work. But they come in when they please, and leave when they please, and spend half their time changing and the other half on Koffee-Kup—*no* company could survive. But that's only half of it—" Walter picked up the reports, searched through them frantically. "This International Jet Transport account—they dropped us because we haven't had a new engine in six years. Why? Because Research and Development hasn't had any money for six years. What can two starved engineers and a second rate chemist drag out of an attic laboratory to compete on the titanium market?" Walter took a deep breath. "I've warned you time and again. Robling had built up accounts over the years with fine products and new models. But since the Switchover seven years ago, you and your Board have forced me to play the cheap products for the

quick profit in order to give your men their dividends. Now the bottom's dropped out. We couldn't turn a quick profit on the big, important accounts, so we had to cancel them. If you had let me manage the company the way it should have been run—"

Torkleson had been slowly turning purple. Now he slammed his fist down on the desk. "We should just turn the company back to Management again, eh? Just let you have a free hand to rob us blind again. Well, it won't work, Towne. Not while I'm secretary of this Union. We fought long and hard for control of this corporation—just the way all the other Unions did. I know. I was through it all." He sat back smugly, his cheeks quivering with emotion. "You might say that I was a national leader in the movement. But I did it only for the men. The men want their dividends. They own the stock, stock is supposed to pay dividends—"

"But they're cutting their own throats," Walter wailed. "You can't build a company and make it grow the way I've been forced to run it—"

"Details!" Torkleson snorted. "I don't care *how* the dividends come in. That's your job. My job is to report a dividend every six months to the men who own the stock—the men working on the production lines."

Walter nodded bitterly. "And every year the dividend has to be higher than the last, or you and your fat friends are likely to be thrown out of your jobs—right? No more steaks every night. No more private gold-plated Buicks for you boys. No more twenty-room mansions in Westchester. No more big game hunting in the Rockies. No, you don't have to know anything but how to whip a Board Meeting into a frenzy so they'll vote you into office again each year—"

Torkleson's eyes glittered. His voice was very soft. "I've always liked you, Walter. So I'm going to pretend I didn't hear you just then." He paused for a long moment. "But here on my desk is a small bit of white paper. Unless you have my signature on that paper on the first of next month, you are out of a job, on grounds of incompetence. And I will personally see that you go on every Whitelist in the country."

Walter felt the fight go out of him like a dying wind. He knew what the Whitelist meant. No job, anywhere, ever, in management. No chance, ever, to join a Union. No more house, no more weekly pay envelope. He spread his hands weakly. "What do you want?" he asked.

"I want a production plan on my desk within twenty-four hours. A plan that will guarantee me a 5% increase in dividend in the next six months. And you'd better move fast, because I'm not fooling."

Back in his cubbyhole downstairs, Walter stared hopelessly at the reports. He had known it would come to this sooner or later. They all knew it—Hendricks of Promotion, Pendleton of Sales, the whole managerial staff.

It was wrong, all the way down

the line. Walter had fought it tooth and nail since the day Torkleson had installed the moose-heads in Walter's old office, and moved him down to the cubbyhole, under Bailey's watchful eye. He had argued, and battled, and pleaded—and lost. He had watched the company deteriorate day by day—and now they blamed him, and threatened his job, and he was helpless to do anything about it—

He stared at the machines, clicking busily against the wall, and an idea began to form. Helpless?

Not quite. Not if the others could see it, go along with it. It was a repugnant idea. But there was one thing they could do that even Torkleson and his fat-jowled crew would understand.

They could go on strike.

"IT'S RIDICULOUS," the lawyer spluttered, staring at the circle of men in the room. "How can I give you an opinion on the legality of the thing? There isn't any legal precedent that I know of." He mopped his bald head with a large white handkerchief. "There just hasn't *been* a case of a company's management striking against its own labor. It—it isn't done. Oh, there have been lockouts, but this isn't the same thing at all—"

Walter nodded. "Well, we couldn't very well lock the men out—they own the plant. We were thinking more of a lock-*in* sort of thing." He turned to Paul Hendricks and the others. "We know how the machines operate. They don't. We also know that the data we keep in the machines is essential to running the business—the machines figure production quotas, organize blueprints, prepare distribution lists, test promotion schemes. It would take an office full of managerial experts to handle even a single phase of the work without the machines—"

The man at the window hissed, and Pendleton quickly snapped out the lights. They sat in darkness, hardly daring to breath. Then: "Okay. Just the man next door coming home."

Pendleton sighed. "You're sure you didn't let them suspect anything, Walter? They wouldn't be watching the house—"

"I don't think so. And you all came alone,. at different times." He nodded to the window guard, and turned back to the little lawyer. "So we can't be sure of the legal end—you'd have to be on your toes."

"I still don't see how we could work it," Hendricks objected. His heavy face was wrinkled with worry. "Torkleson is no fool—and he has a lot of power in the National Association of Union Stockholders. All he'd need to do is ask for managers, and a dozen companies would throw them to him on loan. They'd be able to figure out the machine system and take over without losing a day."

"Not quite." Walter was grinning. "That's why I spoke of a lock-in. Before we leave, we throw the machines into feedback—every one of them. Lock them into reverberating circuits with a code sequence key. Then all they'll do is buzz and sputter until the feedback is broken

with the key. And the key is our secret. It'll tie the Robling office into granny knots—and scabs won't be able to get any more data out of the machines than Torkleson could. With a lawyer to handle injunctions, we've got them strapped."

"For what?" asked the lawyer.

Walter turned on him sharply. "For new contracts. Contracts to let us manage the company the way it should be managed. If they won't do it, they won't get another Titanium product off their production lines for the rest of the year, and their dividends will *really* take a nosedive."

"That means you'll have to beat Torkleson," said Bates. "He'll never go along."

"Then he'll be left behind."

Hendricks stood up, brushing off his dungarees. "I'm with you, Walter. I've taken all of Torkleson that I want to. And I'm sick of the junk we've been trying to sell people."

The others nodded. Walter rubbed his hands together. "All right. Tomorrow we work as usual, until the noon whistle. When we go off for lunch, we throw the machines into lock-step. Then we just don't come back. But the big thing is to keep it quiet until the noon whistle." He turned to the lawyer. "Are you with us, Jeff?"

Jeff Bates shook his head sadly. "I'm with you. I don't know why—you haven't got a leg to stand on. But if you want to committ suicide, that's all right with me." He picked up his briefcase, and started for the door. "I'll have your contract demands by tomorrow," he grinned. "See you at the lynching."

They got down to the details of planning.

THE NEWS hit the afternoon telecasts the following day. Headlines screamed: MANAGEMENT SABOTAGES ROBLING MACHINES, OFFICE STRIKERS THREATEN LABOR ECONOMY, ROBLING LOCK-IN CREATES PANDEMONIUM . . .

There was a long, indignant statement from Daniel P. Torkleson, condemning Towne and his followers for "flagrant violation of management contracts, and illegal fouling of managerial processes." Ben Starkey, President of the Board of American Steel expressed "shock and regret"; the Amalgamated Button-Hole Makers held a mass meeting in protest, demanding that "the instigators of this unprecedented crime be permanently barred from positions in American Industry."

In Washington, the nation's economists were more cautious in their views. Yes, it *was* an unprecedented action. Yes, there would undoubtedly be repercussions—many industries were having managerial troubles; but as for long term effects, it was difficult to say just at present—

And the workmen on the Robling production lines blinked at each other, and at their machines, and wondered vaguely what it was all about—

Yet in all the upheaval, there was very little expression of surprise. Step by step, through the years, economists had been watch-

ing the growing movement toward Union control of Industry with wary eyes. Even as far back as the '40's and '50's Unions, finding themselves oppressed with the administration of growing sums of money—pension funds, welfare funds, medical insurance funds, accruing Union dues—had begun investing in corporate stock. It was no news to them that money could make money. And what stock more logical to buy than stock in their own companies?

At first it had been a quiet movement. One by one the smaller firms had tottered, bled drier and drier by increasing production costs, increasing labor demands, and an ever-dwindling margin of profit. One by one they had seen their stocks tottering as they faced bankruptcy—only to be gobbled up by the one ready buyer with plenty of funds to buy with. At first changes had been small and insignificant: Boards of Directors shifted, the men were paid higher wages and worked shorter hours, there were tighter management policies, and a little less money spent on extras like Research and Development—

At first. Until that fateful night when Daniel P. Torkleson of TWA and Jake Squill of Amalgamated Button-Hole Makers spent a long evening with beer and cigars in a hotel room, and floated the loan that threw Steel to the Unions. Oil had followed with hardly a fight, and as the Unions began to feel their oats, the changes grew more radical.

Walter Towne remembered those stormy days well. The gradual undercutting of the managerial salaries, the tightening up of inter-Union collusion to establish the infamous Whitelist of Recalcitrant Managers. The shift from hourly wage to annual salary for the factory workers, and the change to the other pole for the managerial staff. And then, with creeping malignancy, the hungry howling of the Union Bosses for more and higher dividends, year after year, moving steadily toward the inevitable crisis.

Until Shop Steward Bailey suddenly found himself in charge of a dozen sputtering machines and an empty office.

Torkleson was waiting to see him when he came in next morning. The Union Boss's office was crowded with TV cameras, newsmen, and puzzled workmen. The floor was littered with piles of ominous-looking paper. Torkleson was shouting into a telephone, and three lawyers were shouting into Torkleson's ear. He spotted Bailey, waving him through the crowd into an inner office room. "Well? Did they get them fixed?"

Bailey spread his hands nervously. "The electronics boys have been at it since yesterday afternoon. Practically had the machines apart on the floor."

"I know that, stupid," Torkleson roared. "I ordered them there. Did they get the machines *fixed?"*

"Uh—well, no, as a matter of fact—"

"Well, *what's holding them up?"*

Bailey's face was a study in misery. "The machines just go in circles. The circuits are locked.

They just reverberate."

"Then call American Electronics. Have them send down an expert crew—"

Bailey shook his head. "They won't come."

"They *what?*"

"They said thanks but no thanks. They don't want their fingers in this pie at all."

"Wait until I get O'Gilvy on the phone—"

"It won't do any good, sir. They've got their own management troubles. They're scared silly of a sympathy strike."

The door burst open, and a lawyer stuck his head in. "What about those injunctions, Dan?"

"Get them moving," Torkleson howled. "They'll start those machines again, or I'll have them in jail so fast—" He turned back to Bailey. "What about the production lines?"

The Shop Steward's face lighted. "They slipped up, there. There was one program that hadn't been coded into the machines yet. Just a minor item, but it's a starter. We found it in Towne's desk, blueprints all ready, promotion all planned."

"Good, good," Torkleson breathed. "I have a Director's meeting right now—have to get the workers quieted down a little bit. You put the program through, and give those electronics men three more hours to unsnarl this knot, or we throw them out of the Union." He started for the door. "What were the blueprints for?"

"Trash-cans," said Bailey. "Pure titanium-steel trash-cans."

IT TOOK Robling Titanium approximately two days to convert its entire production line to titanium-steel trash-cans. With the total resources of the giant plant behind the effort, production was phenomenal. In two more days the available markets were glutted. By two weeks, at conservative estimate, there would be a titanium-steel trash-can for every man, woman, child, and hound dog on the North American Continent. The jet engines, structural steels, tubing, and other pre-strike products piled up in the freight yards, their routing slips and order requisitions tied up in the reverberating machines.

But the machines continued to buzz and sputter.

The workers grew restive. From the first day, Towne and Hendricks and all the others had been picketting the plant, until angry crowds of workers had driven them off with shotguns. Then they came back in an old, weatherbeaten 'copter which hovered over the plant entrance carrying a banner with a plaintive message: ROBLING TITANIUM UNFAIR TO MANAGEMENT. Tomatoes were hurled, fists were shaken—but the copter remained—

The third day, Jeff Bates was served with an injunction ordering Towne to return to work. It was duly appealed, legal machinery began tying itself into knots, and the strikers still struck. By the fifth day there was a more serious note.

"You're going to have to appear, Walter. We can't dodge this one."

"When?"

"Tomorrow morning. And before a labor-rigged judge, too." The little lawyer paced his office nervously. "I don't like it. Torkleson's getting desperate. Workers putting pressure on him—"

Walter grinned. "Then Pendleton is doing a good job of selling."

"But you haven't got *time,*" the lawyer wailed. "They'll have you in jail if you don't start the machines again. They may have you in jail if you *do* start them, too, but that's another bridge. Right now they want those machines going again."

"We'll see," said Walter. "What time tomorrow?"

"Ten o'clock." Bates looked up. "And don't try to skip. You be there—because *I* don't know what to tell them."

Walter was there, a half hour early. Torkleson's legal staff glowered from across the room. The judge glowered from the bench. Walter closed his eyes with a little smile as the charges were read. "—breach of contract, malicious mischief, sabotage of the company's machines, conspiring to destroy the livelihood of ten thousand workers —Your Honor, we are preparing briefs to further prove that these men have formed a conspiracy to undermine the economy of the entire nation. We appeal to the spirit of orderly justice—"

Walter yawned as the words went on. "Of course, if the defendant will waive his appeals against the previous injunctions, and will release the machines that were sabotaged, we will be happy to formally withdraw these charges—"

There was a rustle of sound through the courtroom. His Honor turned to Jeff Bates. "Are you consel for the defendant?"

"Yes, sir." Bates mopped his bald scalp. "The defendant pleads guilty to all counts."

The Union lawyer dropped his glasses on the table with a crash. The judge stared. "Mr. Bates, if you plead guilty, you leave me no alternative—"

"—but to send me to jail," said Walter Towne. "Go ahead. Send me to jail. In fact, I *insist* upon going to jail—"

The Union lawyer's jaw sagged. There was a hurried conference. A recess was pleaded. Telephones buzzed. Then: "Your honor, the plaintiff desires to withdraw all charges at this time."

"Objection," Bates exclaimed. "We've already pleaded."

"—feel sure that a settlement can be affected out of court—"

The case was thrown out on its ear.

And still the machines sputtered.

BACK AT the plant rumor had it that the machines were permanently gutted, and that the plant could never go back into production. Conflicting scuttlebutt suggested that persons high in Uniondom had perpetrated the crisis deliberately, bullying Management into the strike for the sole purpose of cutting current dividends and selling stock to themselves cheaply. The rumors grew easier and easier to believe. The workers came to the plants in business suits, it was true, and lounged in the finest of

lounges, and read the Wall Street Journal, and felt like Stockholders. But to face facts, their salaries were not the highest. Deduct Union dues, pension fees, medical insurance fees, and sundry other little items which had formerly been paid by well-to-do managements, and very little was left but the semi-annual dividend checks. And now the dividends were tottering—

Production lines slowed. There were daily brawls on the plant floor, in the lounge and locker rooms. Workers began joking about the trash-cans; then the humor grew more and more remote. Finally, late in the afternoon of the eighth day, Bailey was once again in Torkleson's office.

"Well? Speak up! What's the beef this time?"

"Sir—the men—I mean, there's been some nasty talk—they're tired of making trash-cans. No challenge in it. Anyway, the stock room is full, and the freight yard is full, and the last run of orders we sent out came back because they don't want any more." Bailey shook his head. "The men won't swallow it any more. There's—well, there's been talk about having a Board Meeting."

Torkleson's ruddy cheeks paled. "Board meeting, huh?" He licked his heavy lips. "Now look, Bailey—we've always worked well together. I consider you a good friend of mine. You've got to get things under control. Tell the men we're making progress. Tell them management is beginning to buckle from its original stand. Tell them we expect to have the strike broken in another few hours. Tell them anything—"

He waited until Bailey was gone. Then, with a trembling hand he lifted the visiphone receiver. "Get me Walter Towne," he said.

"I'm not an unreasonable man," Torkleson was saying miserably, waving his fat paws in the air as he paced back and forth. "Perhaps we were a little demanding—I concede it! Overenthusiastic with our ownership, and all that. But I'm sure we can come to some agreement. A hike in wage scale is certainly within reason. Perhaps we can even arrange for better company houses—"

Walter Towne stifled a yawn. "Perhaps you didn't hear me. The men are agitating for a meeting of the Board of Directors. I want to be at that meeting. That's the only term I'm interested. in."

"But there wasn't anything about a Board meeting in the contract your lawyer presented—"

"Well, you didn't like that contract. So we tore it up. Anyway, we've changed our minds."

Torkleson sat down, his heavy cheeks quivering. "Gentlemen, be reasonable! I can guarantee you your jobs—even give you a free hand with the management. So the dividends won't be so nice—the men will have to get used to that. That's it, we'll put it through at the next executive conference, give you—"

"The Board meeting," Walter said gently. "That'll be enough for us—"

The Union Boss swore and

slammed his fist on the desk. "Walk out in front of those men—after what you've done? You're fools! Well, I've given you your chance. You'll get your Board meeting. But you'd better come armed. Because I know how to handle this kind of a Board meeting—and if I have anything to say about it, this one will end with a massacre."

THE MEETING was held in a huge auditorium in the Robling administration building. Since every member of the Union owned stock in the company, every member had the right to vote for members of the Board of Directors. But in the early days of the Switchover, the idea of a Board of Directors smacked too strongly of the old system of corporate organization to suit the men. The solution had been simple, if a trifle ungainly. Everyone who owned stock in Robling Titanium was automatically a member of the Board of Directors, with Torkleson as chairman of the Board. The stockholders numbered over ten thousand . . .

They were all present. They were packed in from the wall to the stage, and hanging from the rafters. They overflowed into the corridors; they jammed the lobby. Ten thousand men rose with a howl of anger when Walter Towne walked out on the stage. But they quieted down again as Dan Torkleson started to speak.

It was a masterful display of rabble-rousing. Torkleson paced the stage, his fat body shaking with agitation, pointing a chubby finger again and again at Walter Towne. He pranced and he ranted. He paused at just the right times for thunderous peals of applause. "This morning in my office we offered to compromise with these jackals," he cried, "and they rejected compromise. Even at the cost of lowering dividends, of taking food from the mouths of your wives and children, we made our generous offers. They were rejected with scorn. These thieves have one desire in mind, my friends—to starve you all, to a man; to destroy your company and your jobs. To every appeal they heartlessly refused to divulge the key to the lock-in. And now this man—the ringleader who keeps the key word buried in secrecy—has the temerity to ask an audience with you. You're angry men; you want to know the man to blame for our hardship." He pointed to Towne with a flourish. "I give you your man. Do what you want with him."

The hall exploded in angry thunder. The first wave of men rushed onto the stage as Walter stood up. A tomato whizzed past his ear and splattered against the wall. More men clambered up on the stage, shouting and shaking their fists.

Then somebody appeared with a rope.

Walter gave a sharp nod to the side of the stage. Abruptly the roar of the men was drowned in another sound—a soul-rending, teeth-grating, bone-rattling screech. The men froze, jaws sagging, eyes wide, hardly believing their ears. And then, in the instant of silence as the factory whistle died away, Walter grabbed the microphone. "You want the

code word to start the machines again? I'll give it to you before I sit down!"

The men stared at him, shuffling, a murmur rising. Torkleson burst to his feet. "It's a trick!" he howled. "Wait 'til you hear their price—"

"We have no price, and no demands," said Walter Towne. "We will *give* you the code word, and we ask nothing in return but that you listen for sixty seconds." He glanced back at Torkleson, and then out to the crowd. "You men here are an electing body—right? You own this great plant and company, top to bottom—right? *You should all be rich*—because Robling could make you rich. But none of you out there is rich. Only the fat ones on this stage are—but I'll tell you how *you* can be rich—"

They listened, then. Not a peep came from the huge hall. Suddenly, he was talking their language.

"You think that since you own the Company, times have changed. Well, have they? Are you any better off than you were? Of course not. Because you haven't learned yet that oppression by either side leads to misery for both. You haven't learned moderation. And you never will, until you throw out the ones who have fought moderation right down to the last ditch. You know who I mean. You know who's grown richer and richer since the Switchover. Throw him out, and you too can be rich—" He paused for a deep breath. "You want the code word to unlock the machines? All right, I'll give it to you."

He swung around to point a long finger at the fat man sitting there. "The code word is TORKLESON—"

MUCH LATER, as Walter Towne and Jeff Bates pryed the trophies off the wall of the big office, the lawyer shook his head sadly. "Pity about Dan. Gruesome affair."

Walter nodded as he struggled down with a moose-head. "Yes, a pity—but you know the boys when they get upset."

"I suppose so." The lawyer stopped to rest, panting. "Anyway, with the newly-elected Board of Directors, things will be different for everybody. You took a long gamble."

"Not so long. Not when you knew what they wanted to hear. It just took a little timing."

"Still—I didn't think they'd elect you Secretary of the Union. It just doesn't figure—"

Walter Towne chuckled. "Doesn't it? I don't know. Everything's been a little screwy since the Switchover came. And in a screwy world like this—" He shrugged, and tossed down the moose-head. "*Anything* figures." • • •

We have hardly begun to understand and conquer the universe. Discoveries of the future will make the discoveries of our time seem despicable and superficial.
—*James Sumner*

What Is Your Science I. Q.?

THIS QUIZ isn't so tough as the last two. Count 5 for each correct answer, and you are very good if you can hit a score of 80. The correct answers are on page 119.

1. The period of nineteen years after which the new moon and the full moon fall on the same days of the year again is called the ________ cycle.
2. Which of the following isn't a star, and what is it? Procyon, Mizar, Spica, Regulus and Ganymede.
3. Radio and ________ waves travel at the same speed.
4. What is the name given to an especially bright meteor or fireball?
5. An escape velocity of ________ miles per hour is necessary for a ship to leave the Earth's atmosphere.
6. How many years pass in the cycle of Encke's comet?
7. The Heaviside Layer is another name for the Earth's ________.
8. In which constellation can the star Vega be found?
9. The regular spacing of the planets was the basis for the hypothesis contained in ________ Law.
10. Nereid is one of the moons of Neptune. Can you name the other?
11. A first-magnitude star is ________ times brighter than a sixth-magnitude star.
12. What is the name of the comet which has a period of two thousand years?
13. Which of the planets rotates most rapidly?
14. Aeroembolism is due to the formation of ________ bubbles in the blood and spinal fluid brought about by rapid ascent into high altitudes.
15. The largest number of asteroids lie in the area between Jupiter and what other planet.
16. The planet which requires eighty-four Earth years for one circuit of the sun is ________.
17. Deutrons are the nuclei of which element?
18. The technical term for the ultimate "heat death" of the universe is "maximum ________."
19. Mach numbe one is equal to how many per hour?
20. What is the chief constituent of the atmosphere of the moon Titan?

A new rocket designed to carry 150 pounds of scientific instruments 180 miles into the air at one shot was recently revealed. The 180 mile altitude is expected to set a record high for a single stage rocket. Called Aerobee-Hi rockets, they will be pressure sealed so that samples of air taken high in the atmosphere will not be contaminated by gases leaking out of the rocket. Such leakage has spoiled all measurements of this kind from Viking rockets, since they were literally flying in an envelope of their own gases. Most promising development in rocketry so far, cost of the Aerobee-Hi is only one-tenth that of a Viking.

A new concept of insect control, keeping insects from growing up, is being evolved by scientists in the U.S. Department of Agriculture. It promises fewer house-flies and safer foods. Using chemicals, the aim of the new idea is to keep insect pests from ever becoming adults and laying eggs rather than killing them outright. Preliminary tests indicate that these chemicals can be used effectively against DDT-resistant flies. In addition, they are "non-toxic" to humans and animals and allow control where poisonous insecticides could not be used. Seeing this growth-inhibiting method as a weapon of the future, the researchers have found that chemicals such as colchicine prevent cell division, and others slow down insect metabolism. In one test alone, DDT-resistant flies were more affected than normal ones. Only three percent of the resistant-flies reached normal adulthood.

Every camera in the nation is a potential radiation detector when equipped with a new device which can convert them without interfering with their normal function. The detector employs a photosensitive sheet which will record a light spot on a black background when subjected to X-ray or gamma radiations. In operation, short-wave electromagnetic radiations pass through an intensifier which emits a fluorescent light that causes the light spot. The radiation-caused light is readily distinguished from normal film fogging or from that caused by light leaks.

Troops will be better equipped for desert warfare of the future because of an eighteen month research project recently concluded by geographers. The work was done in the Mojave Desert and included learning everything possible about the climate, vegetation and topography of a typical desert. To gather round-the-clock weather data, 14 small weather stations were erected at various elevations. For ten blistering days one man lived alone at the summit of the mountains to gather

such data. Some facts uncovered were: desert mountain summits are warmer than desert floors on winter nights; summertime humidity is higher than winter humidity; and dark colored basaltic rock is 30 degrees hotter in summer than light hued granite.

Commercial heliports which may someday spring up in every city in the country will probably be on the ground and smaller than a city block. Such a field will measure about 200 by 400 feet. Except for parking room, most of the area will be set aside for emergency landing space. The ideal heliport will have a wide unobstructed street-level approach, and stationing the field near railroad yards, parks, ponds, waterways, or widely divided highways would permit this ease of approach. Suburban heliports of the future will probably be found near parking lots, filling stations, post offices, resorts or large factories. Since 89% of all intercity traffic is for distances of less than 250 miles per trip, such a network of heliports would be the ideal traffic solution. The U.S. has only one such port in operation and is far behind Europe, where seven already exist, with an eighth under construction in Paris.

A method of decoying fish to swim where one wants them to by using artificial odors was recently introduced, and someday such fish as salmon may be induced to return to a designated spawning area by use of such underwater perfume. The decoying operation employs the theory that animals and fish, whose migratory habits depend on their sense of smell, can be reared to return to a specific area impregnated with a false scent. One method of diverting salmon from their home spawning grounds would be to utilize odors to which salmon are particularly sensitive. A group of fry could be conditioned to such an artificial odor during hatchery rearing, and remembering the odor, could several years later be reoriented from their natural undesirable spawning grounds to another location downstream; thus avoiding problems of water pollution, power dams and the diversion of waters by irrigation. In addition to helping the fish return home safely, decoying fish may be valuable in getting them away from given areas where they are interfering with sonar contact between a ship and an underwater target.

More accurate spotting of brain tumors by radioactive arsenic is now possible with an improvement in the detecting method. Radioactive arsenic is injected into the patient's veins in amounts so small that it cannot poison the patient; he then lies down for one hour while twin scintillation counters move back and forth scanning the head line by line. Arsenic concentrates in brain tumors and the machine outlines these areas. This new sensitive machine will increase the accuracy of the procedure from the 80% of the older method to 90 to 95%.

If a nuclear war is ever fought, children would do well to get and keep an accurate record of how far they

were from ground zero at the time, and of how much radiation fall-out struck them. Genetic mutations may be recessive traits, in which case the damage would not show unless two persons carrying the genes married. Then the children would show the effects of the radiation damage to their parents' genes. To get a marriage license in the future, a couple might have to produce records showing that at least one of them could not have been previously exposed to a potentially gene-damaging amount of radiation, just as their parents had to show a negative blood test for syphilis.

The atomic powered car is not yet at hand, but an atomically processed fuel for your present car is in the works. Standard Oil recently gave a preview of its new experimental project for using atomic energy in the production of new petroleum products. Whether atomic radiation mixed with oil will provide a new super-gasoline or a way of making gasoline cheaper are two of the things the company hopes to determine. Preliminary experiments have shown that gamma rays produced by a cobalt pipe cause chemical reactions with petroleum products heretofore beyond the reach of science. The atomic generated gamma rays have also indicated that they may open ways to the production of gasoline without the use of heat, pressure or catalysts.

Energy from the sun and the atom, may someday convert salt water into fresh water. Looking into the future, scientists have tried several new methods. One distills salt water by rapid-boiling it in a vacuum. Another is electro-ion migration, likened to electroplating. In this process, molecular fragments of the dissolved salts are electrically extracted through thin membranes. The crux of realistic accomplishment in demineralization of saline water seems to be the prohibitive cost. More inexpensive power is needed. Nuclear reactors, low grade fuel or solar stills, which harness the sun's power, seem to be the only possible answers to an urgent problem in arid and semi-arid areas covering a third of the Earth's land surface.

Hundreds of thousands of simultaneous telephone conversations may soon be crammed into a single two-inch pipe and transmitted long distances on wave frequencies higher than any ever used in communication before. The capacity of the new circular wave-guide exceeds that of the most modern coaxial cable, which can handle only 7,400 two way calls at a time. The frequencies of the microwaves used in the new method range from 35,000 to 75,000 megacycles. In addition, the number of different frequencies this tubing can carry is so huge that all conventional transmission wavelengths of all media could be fitted into its spread with ease. Tiny super-high frequency waves that move through the new pipe have been found to aid the efficiency of the transmission, and the loss of energy is so small that boosters would only be necessary every 25 miles.

FOR you science fiction fans who like to sit down with a puzzle that offers a *real* challenge—that will test your knowledge of things scientific and otherwise—grab a copy of this newest and latest magazine of puzzles by expert composers for expert puzzle doers—

MASTER crossword PUZZLES

It's chock-full of some of the most interesting crosswords, diagramless puzzles, crostics and cryptograms to be found anywhere in America . . . the kind *guaranteed* to keep your wits nimble and your pencil busy. Weeks of fun in every issue!

At all newsstands — Only 25c

hue AND cry

Sir:

I'm rather fed-up with the idea of time travel and telepathy as portrayed in S-F. In my opinion they are scientific absurdities.

Consider the energy required for a person to travel back in time to say, 6 months ago. The whole of creation must then be returned to that date. Planets would have to be reversed in their courses, people would have to be shifted perhaps thousands of miles in order that they could occupy the same places they had 6 months before. Matter which was present on that person, but since had been lost, must be returned to him from various distances . . . and so violently as to kill him instantly. The energy required for all this is so great, that on this count alone time travel is a scientific absurdity.

The contention that in time travel everything is continuously extended both forwards and backwards in time is merely uncontrolled speculation having no facts to support it which are amenable to verifying tests, and therefore must be ruled mathematical fantasy. Even if this was true, my argument on energy is not weakened for it is inconceivable that the time scale of a minute part of the whole of creation could be altered so as to accelerate that part into the future or into the past without the remainder of creation being similarly affected. A considerable factor of uncertainty would be introduced which would make nonsense of all history and even of individual memories. Day by day predictions of the motion of planets would be rendered unreliable to say the least.

Telepathy is also being mangled. True telepathy is a transmission of feelings and nothing more. Alarm, fear, hate, anger, pity, love, amusement . . . these are emotional responses that can be "sent." Words or pictures are not transmitted. The scientific mind cannot admit telepathy until what passes between two people can be identified. We know the brain produces electric currents and the possibility that these may affect another must be conceded but in cases where we are asked to believe exchanges of complex verbal and pictorial telepathy there is a lack of explaining factors to substantiate it. What passes cannot be matter or energy because they cannot be produced by something which is abstract, and they are the only means of communication that we know. It is also in-

conceivable that a telepath can detect simultaneously in the brain of another a series of multiple brain-cell impulses of different strengths and with different routes in that brain. Only the impossible is absurd, and any sober scientific view must be that only emotional telepathy is possible, all other forms being impossible.

Cordially,
G. W. Walton
England

Anyone care to take up the cudgel in defense of time-travel and telepathy? We'd be glad to offer part of the column for argument.

Dear Mr. Quinn:

IF has really been improving steadily and now compares with the best.

STEPHEN'S
Book Service

125 FOURTH AVE.
NEW YORK 3, N. Y.
Phone GRamercy 3-5990

We Stock All current American Science Fiction in Book Form and carry current Magazines and Pocket Books.

A large selection of Science Fiction is available of British Books, Magazines and Pocket Editions.

We carry a large stock of Back Issues of Science Fiction Magazines.

CATALOGUES ISSUED

Your new Masthead "Worlds Of Science Fiction" is much more eye-catching.

Budrys', THE STRANGERS was the best in the June issue.

Glad to see the letter column is back in the form of "Hue And Cry." Bring back "Personalities In Science Fiction." It was a good feature.

Sincerely,
Alan Cheuse
Perth Amboy, N. J.

Thanks for the bouquet. We've got another excellent department coming up that will beat anything you've yet seen for news about personalities, events, etc.

Dear Mr. Quinn:

I just picked up the June issue of IF to find out when the next issue will be out and . . . lo and behold! June 14th! What happened? How come IF has gone back to bi-monthly? I rate IF number one as a science fiction magazine and am puzzled over the return to bi-monthly form. I surely hope it's nothing permanent. I couldn't stand having my IF reading cut in half. Please let's get IF back to a monthly.

Sincerely yours,
Charles F. Durang
Libertyville, Ill.

You have our word for it. As soon as it seems at all feasible, we'll be back on the stands each and every month.

Dear Mr. Quinn:

I have been a science fiction fan

for several years now, and it no longer comes as a shock to be able to buy the June issue of IF in the middle of April. But it does make me wonder, as I read your SCIENCE BRIEFS, just where in Time I am.

You predict for the future, bathing suits made of the new stretch yarns. These are currently being advertised by Cleveland's larger, more progressive department stores.

That doesn't bother me so much because they are comparatively new. What does amaze me is your reference to supermarket doors that open as you approach them. Such things have been standard in and around Cleveland for a good number of years, and are taken for granted. So much so, that many people walk right into doors that are not the self-opening type, or those that are but aren't working properly, without a thought of putting out a hand or foot to push the door open.

If these things are in the future, and I am taking them for granted, I imagine that the big question is: am I in the future, or are you in the past, and if so, why?

Confusingly yours,
Mrs. Alan Kopperman
Euclid, Ohio

P.S. Don't get mad, this is all in fun. I ran into an old-style door the other day and referred to it as old-fashioned. Your magazine made me wonder.

Cleveland hereby gets our nomination as the "Cradle of the Future". Seriously, though we'll try not to be so "old-fashioned" in future issues.

Dear Editors:

CONGRATULATIONS! Two, count them, TWO lovely brand new ideas both nicely handled, are unusual to say the least, in the welter of stf-stuff we've been getting lately on all sides. "Franchise" by Azimov and "Mold of Yancy", by Dick, were excellent. They make up for a lot of cliches that have been kicking around lately. Food for some pretty intense thinking too. If we aren't careful, these things could happen to us . . . and I'll bet we'd hardly know it until it was too late.

Sincerely,
G. M. Fox
Portland, Oregon

Thanks for backing up our own opinions. For more "thought-provokers" look for the "Happy Clown" and "Message from Space" in our December issue.

WHAT IS YOUR SCIENCE I.Q.?

ANSWERS: 1—Metonic. 2—Ganymede is one of Jupiter's moons. 3—Light. 4—Bolide. 5—25,000. 6—3.3 years. 7—Ionosphere. 8—Bootes. 9—Bode's. 10—Triton. 11—100. 12—Donati's. 13—Jupiter. 14—Nitrogen. 15—Mars. 16—Uranus. 17—Heavy hydrogen. 18—Entropy. 19—761. 20—Methane.

These great minds were Rosicrucians . . .

WHAT SECRET POWER DID THEY POSSESS?

Benjamin Franklin

Isaac Newton

Francis Bacon

Why were these men great?

How does anyone — man or woman — achieve greatness? Is it not by mastery of the powers within ourselves?

Know the mysterious world within you! Attune yourself to the wisdom of the ages! Grasp the inner power of your mind! Learn the secrets of a full and peaceful life!

Benjamin Franklin, statesman and inventor . . . Isaac Newton, discoverer of the Law of Gravitation . . . Francis Bacon, philosopher and scientist . . . like many other learned and great men and women . . . were Rosicrucians. The Rosicrucians (NOT a religious organization) have been in existence for centuries. Today, headquarters of the Rosicrucians send over seven million pieces of mail annually to all parts of the world.

The ROSICRUCIANS

San Jose (AMORC) California, U.S.A.

THIS BOOK FREE!

Write for your FREE copy of "The Mastery of Life" — TODAY. No obligation. A non-profit organization. Address: Scribe K. G. T.

Scribe K. G. T.
The ROSICRUCIANS
(AMORC)
San Jose, California, U.S.A.

SEND THIS COUPON

Please send me the *free* book, *The Mastery of Life,* which explains how I may learn to use my faculties and powers of mind.

Name____________________

Address____________________

City____________________

State____________________

—Continued from other side

Man Will Fly to the Moon Soon!

Here Are the FACTS and Problems of Conquering Space

AT LAST! The world's top space research scientists reveal their plans for the conquest of space. You see their actual diagrams for a "round-the-moon" ship designed to travel in space only. You get a detailed preview of the first flight to the moon . . . blueprints for a 3-stage chemically propelled Rocket Ship . . . actual plans for a Giant Space Station to launch moon ships—**1075** *miles above the earth!*

NOT science-fiction, but science-FACTS. "Across the Space Frontier" is the most comprehensive study of interplanetary travel ever published. Written by not one—but SEVEN of the greatest living space experts including: Dr. Wernher Von Braun, Willy Ley, Dr. Heinz Haber, Dr. Joseph Kaplan.

Any 3

of These Complete New Masterpieces of

SCIENCE-FICTION

Yours for Only $1.00 with membership

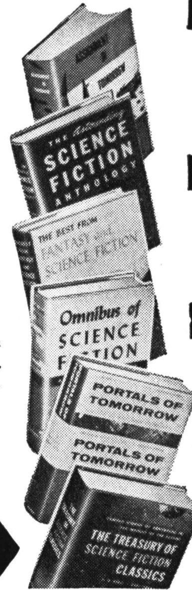
ACROSS THE SPACE FRONTIER—Written by the SEVEN greatest living space experts. See description above. Pub. Ed. $3.95.

15 STORIES AND A NOVEL

ASSIGNMENT IN TOMORROW—A scalp-tingling volume about the life of the future—edited by Frederik Pohl. Absorbing, masterfully written stories that provide a chilling glimpse into tomorrow. Pub. Ed. $3.00.

585 PAGES — 23 STORIES

THE ASTOUNDING SCIENCE-FICTION ANTHOLOGY—Best tales from a dozen years of Astounding Science-Fiction Magazine selected by editor, John W. Campbell, Jr. Pub. Ed. $3.95.



3RD SERIES — 16 STORIES

THE BEST FROM FANTASY AND SCIENCE-FICTION
Selected stories from Fantasy and Science-Fiction Magazine. The woman who became her own daughter . . . atomic power from beans . . . etc. Pub. ed. $3.25.

562 PAGES — 43 STORIES

OMNIBUS OF SCIENCE-FICTION—Stories by outstanding authors of Wonders of Earth and Man . . . of startling inventions . . . of Outer Space . . . of Far Traveling, etc. Pub. Ed. $3.50.

371 PAGES — 16 STORIES

PORTALS OF TOMORROW
A sparkling crop of weird tales selected by August Derleth. The man who invented a solid vacuum, and many others. Pub. Ed. $3.75.

A WHOPPING 704 PAGES

THE TREASURY OF SCIENCE-FICTION CLASSICS
World-renowned stories by H. G. Wells, Jules Verne, Conan Doyle, Huxley, Philip Wylie, Poe, F. Scott Fitzgerald, J. P. Priestly, etc. Pub. Ed. $2.95.

SEND NO MONEY—*Just Mail Coupon*

Your choice of ANY 3 of the new Science-Fiction masterpieces described here, a $9.20 to $12.40 value—yours for only $1.00. Plus FREE Round-Trip Reservation to the Moon. (See Other Side.) Two books are your gift for joining, and one is your first Club selection. Every month, you will be offered the "cream" of the new $2.50 and $3 Science-Fiction books—for only **$1. You** take only those books you really want—as few as four a year. This offer may have to be withdrawn. So mail coupon RIGHT NOW to:

SCIENCE-FICTION BOOK CLUB
Dept. IF-10 Garden City, N. Y.

SCIENCE-FICTION BOOK CLUB.
Dept. IF-10, Garden City, N. Y.

Please rush the 3 books checked below, as my gift books and first selection. Bill me only $1 for all 3 (plus shipping charge), and enroll me as a member. Every month send free bulletin describing coming selection. For each book I accept, I will pay only $1 plus shipping. I need take only four books during each year I am a member and may resign at any time after accepting 4 selections.

GUARANTEE: If not delighted, I may return all books in 7 days, pay nothing and this membership will be cancelled.

- ☐ Across Space Frontier
- ☐ Assignment in Tomorrow
- ☐ Astounding Anthology
- ☐ Best from Fantasy and Science-Fiction
- ☐ Omnibus of Science-Fiction
- ☐ Portals of Tomorrow
- ☐ Treasury of Science Fiction Classics

Name______________________________
(PLEASE PRINT)

Address______________________________

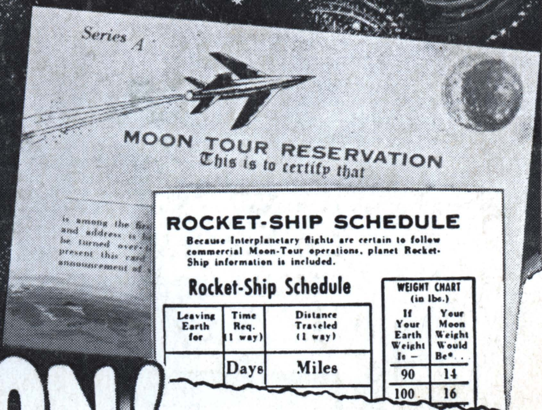
City______________ Zone______ State________

Selections in Canada $1.10 plus shipping. Address Science-Fiction Club, 105 Bond, Toronto. (Good only in U. S. A. and Canada.)

SIGN COUPON FOR BONAFIDE

FREE

Round Trip Reservations to the MOON!



Yes, It's True—An Opportunity to Have Your Name "On File" with the First Company Embarking on Commercial Flights to the Moon! And You Get a Certified Reservation to PROVE It!

SIMPLY sign application below—and coupon on other side to become a member of The Science-Fiction Book Club... and receive your bona fide Moon-tour-Reservation—FREE! It will certify that you are among the first to apply for a reservation to the moon. *It will in no way commit you to make the voyage.* It simply means that your name is being held on file to be turned over to the first company making trips to the moon.

Your reservation will include fascinating facts to amaze your friends: your weight on the moon... a Rocket-Ship Schedule. Like your interest in Science-Fiction books, your wallet-size reservation will be evidence of your adventurous spirit... your imagination... your interest in the world of tomorrow. Simply choose ANY 3 of the exciting books shown here—for only $1. Fill out the coupon—and receive your Moon-Reservation Trip FREE!

PLUS

Any 3 OF THESE COMPLETE NEW MASTERPIECES OF SCIENCE-FICTION

Yours for only $1.00 with membership

ROUND-TRIP MOON-TOUR APPLICATION

Moon-Tour Reservations, Secretary
Science-Fiction Book Club

Please rush me my FREE Round-Trip-to-the-Moon Reservation.

My Reservation, which will be printed on a handy, wallet-size card, will include my actual Moon weight and a complete Rocket-Ship Flight for the Moon, Venus, Mars, Jupiter, Saturn. I will in no way be committed to make a voyage.

IMPORTANT: This Application Will NOT be Honored Unless Filled Out and Signed on the Reverse Side.

SEE OTHER SIDE OF COUPON FOR $9.20 TO $12.40 WORTH OF SCIENCE-FICTION BEST-SELLERS—for only $1.00!

SEE OTHER SIDE FOR COMPLETE DETAILS!