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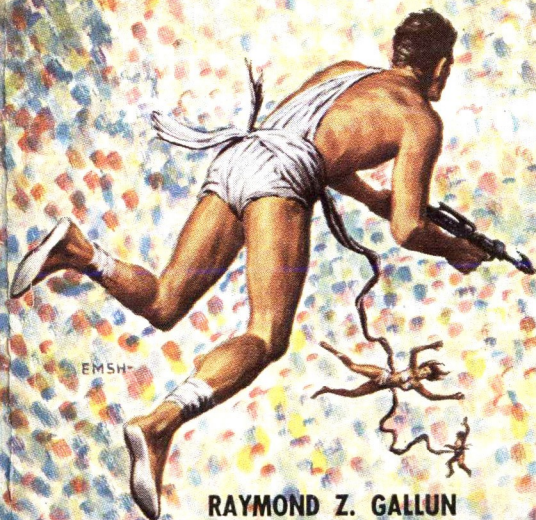
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PEOPLE MINUS X

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RAYMOND Z. GALLUN

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ABOUT THE AUTHOR

Ray Gallun's stories have appeared in virtually every science-fiction magazine known to English-speaking man—Galaxy, Astounding Science Fiction, Amazing Stories, Marvel Tales, Startling Stories, etc., etc., plus Collier's, Family Circle, Utopia (Germany), and various anthologies.

He was born in Beaver Dam, Wisconsin, in 1910, attended the University of Wisconsin, and has since spent most of his time, when not writing, traveling through the U. S., Mexico, Hawaii, Europe, and the Middle East. He is currently a resident of New York City.

PEOPLE MINUS X

by

RAYMOND Z. GALLUN

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PEOPLE MINUS X

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LEST WE FORGET THEE, EARTH

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I

ED DUKAS was writing letters. Someone or something was also writing—unseen but at his elbow. It was perhaps fifteen minutes before he noticed. Conspicuous at the center of the next blank sheet of paper he reached for, part of a word was already inscribed:

"Nippe . . ."

The writing was faint and wavering but in the same shade of blue ink as that in his own pen.

Ed Dukas said "Hey?" to himself, mildly.

The frown creases between his hazel eyes deepened. They were evidence of strain that was not new. The stubby forefinger and thumb of his right hand rubbed their calloused whorls together. Surprise on his square face gave way to a cool watchfulness that, in the last ten years of guarded living, had been grimed into his nature. Ed Dukas was now twenty-two. This era was hurtling and troubled. Since his childhood, Ed had become acquainted with wonder, beauty, hate, opportunity and disaster on a cosmic level, luxury, adventure, love. Sometimes he had even found peace of mind.

He put down his pen, leaving the letter he had been writing suspended in mid-sentence:

. . . Pardon the preaching, Les. Human nature and everything else seems booby-trapped. They drummed the idea of courage and careful thinking into us at school. Because so much that is new and changing is a big thing to handle. Still, we'll have to stick to a course of action.

Now Ed sat with his elbows on his table, that other, no longer quite blank, sheet of paper held lightly in his hands. He sat there, a stocky young man, his hair cut short like a hedge, the clues of his existence around him: student ban-

ners on the walls; a stereoptic picture of his track team—in color of course; ditto for his astrophysics class; his bookcase; his tiny sensipsych set; and the delicate instruments that any guy who hoped to reach the next human goal, the nearer stars, had to learn about.

His girl's picture, part of any youth's pattern of life for the last three centuries, smiled from beside him on the table. Dark. Strong as girls were apt to be, these days. Beautiful in a rough-hewn way. But even with all that strength to rely on, he was worried about her more than ever now. Times were strange. He glanced at her likeness once. Then his gaze bounced back to the paper in his hands.

His nerves tingled at the eerie thing that was happening there. He didn't know whether to feel afraid of it or hopeful. Man was stumbling toward ultimate mastery of his own flesh and the forces of the universe. But the distance remained enormous, though technical science was moving forward, perhaps too swiftly, on all fronts. Part of Ed's fear before the unknown was like the stage fright of an inexperienced actor. You never quite knew what was ahead or how to judge anything strange that you saw.

"Nippe . . ."

At the end of the line which made the "e" there was a tiny speck of blue ink. Almost imperceptibly, like the minute hand of a clock, it crept on, curving and looping to form another letter.

"Nipper" the word was now.

This could be somebody's funny gag, Ed thought. Somebody with a gadget. The world is full of gadgets these days. Maybe too full.

It occurred to him that a pal might be playing a joke with some simple device bought in a novelty store. But probability leaned toward something deeper and more costly. Who knew? Someone might have invented a way to make a man invisible. You didn't deny that anything could be, any more.

"Speak up!" he ordered softly.

But no answer came, and his wondering gaze found nothing unusual in the room around him. He froze. "*Nipper*." It could be part of a message, an honest attempt to convey vitally important information. Or it could be the forerunner of violence aimed in his direction. Through no fault of his own, he had had enemies for ten years. Tonight they might really act. To die was still possible. In spite of vitaplasm. Or the more tedious method that employed natural flesh. Or the tiny cylinders hidden away in vaults. Lives were now in danger again. Human, and almost human . . .

For a moment Ed wanted to give a warning and to call others into consultation. He wanted to shout, "Dad! Mom! Come here!"

He didn't do so. Between him and the precise, benign personality that he called Dad there was a gradually growing barrier. And for his mother, beautiful and young by art and science, he had that feeling of male protectiveness that takes the form of keeping possible dangers hidden.

Ed decided to work on his own. Being essentially careful and slow moving when it came to delicate processes, he had not touched that creeping droplet of ink. Its secret might thus be destroyed. No, he'd never do a thing so foolish.

Swiftly he folded the paper and fastened the writing under his microscope. The ink speck was almost dry now, and nothing was hidden in it. The line of the writing itself was odd under magnification. Here and there it showed tiny, irregular dots at spaced intervals, connected by fine, dragging marks. That was all.

Of course he realized that *Nipper* might be only the first cryptic word of a message and that he had only to wait and see what would follow.

Until he began to wait, however, the significance of the word itself eluded him. A child's nickname was all that it suggested.

But now his mind bore down on it. And he had the answer almost at once. A small boy climbing the wall of a pretty garden. And his casual christening by a pleasant stranger who met him thus for the first time. Among more vivid and significant details, the memory of the name itself had been mislaid. But Ed Dukas knew that in his boyhood one person had always called him Nipper: Uncle Mitch Prell, and nobody else. Now it seemed like a secret sign.

Ed gulped, his reaction suspended somewhere between shocked pleasure and a frosty sense of eeriness. To have a friend, whom he had loved as a child, vanish into space and into apparent nonexistence after becoming a fugitive, and then to have what *seemed* to be this friend try to communicate again after ten years, and in this weird manner—well—how would you say it? Ghosts, of course, were pure superstition. But in this age one could still react as if to the supernatural—with tingling hide and quickened heartbeats. In fact, with the vast growth of technology, more than ever was such a feeling possible.

"Uncle Mitch!" Ed Dukas called quietly.

Again there was no reply. The name on the paper still could be somebody else's trick. Granger's, maybe. There were ways for him to have learned a nickname. Many people might admire Granger as much as others despised him. And it was hard to say what he might do, or when. Or how, for that matter. He was clever. And wrong.

There was still another thing to remember. Ed did not altogether love the memory of his uncle, Dr. Mitchell Prell. For this famous scientist was marked with the stigma of responsibility for a terrific mishap. No, Prell did not bear the burden alone. There were other scientists, it was said, who had poked too roughly, and with too sharp a stick, into Nature's deepest lair. Nature had snarled back. Ed had grown up with the public hate that had resulted. He had fought against it, yet he had felt it, until sometimes he did not know where he himself stood.

Now he waited for more writing to be traced on the paper under the microscope. A minute passed, but there was nothing more. He did notice, however, that the letters of that one word matched roughly the austere handwriting of his uncle.

Once he glanced toward the window with some nervousness. Outside, the night was glorious. Never again would nights be hideous as they once had been. He saw lush gardens under silver light. If any devilish thing not known until recent months slithered through the shadows, it kept hidden. Ed saw other neighboring houses. New trees had grown to fair size in ten years. Older and larger trees remained lopsided and gnarled. But their burn scars had healed.

Otherwise there was nothing left to monument the past—except, perhaps, the sullen mutter of voices in nearby streets.

But Ed Dukas's mind, triggered by the name *Nipper* and by awareness of Mitchell Prell, slipped briefly away from the present. He had often explored memory to find understanding. At school, after the catastrophe, psychiatrists had made every kid do that. So that neuroses might be broken or lessened or avoided. So that animal terror would not draw a curtain over a mental record of an interlude. So that memory might not be lodged, like a red coal of hysteria, in the subconscious.

Like a trained dog leaping through a flaming hoop, Ed Dukas's thoughts plunged back to that zone where his earliest memories faded into the mists of infancy:

A birthday cake with two candles. A fountain splashing in the patio of this same house. A dachshund, Schnitz, which a little boy put in almost the same category as the flat, rubber-tired robots that cleaned the rooms. Where was the distinction between machines and animals?

Flowers, hummingbirds, and butterflies in the garden. The echoes of footsteps on stone floors. Toy space ships and star ships at Christmas. The star ships were things yet to be-

come real. . . . There was endless interest in life then. But even in those days there were signs of cautious and puzzled guidance.

There was the sensipsych, of course. It was a wonderful box of dark wood in the living room. A soft couch folded down from it. There you lay, and for a moment strange golden light flickered into your eyes. You went to sleep, but you did not really go to sleep. For you became someone else. Maybe a cartoon character in a world where everything looked different. Funny things happened to you that frightened you at first; but then you laughed when you found that there was no harm in them.

Or, instead of being in such a crazy fairyland, you might be a real boy in space armor jumping across the surface of a huge chunk of rock called an asteroid, while stars and a blazing white sun stared at you from blackness. You were very busy helping others to roof the asteroid with crystal, and to put air underneath, and to build houses and factories where people might live and work. Always more and more people spreading out and out to populate the empty worlds of space.

But you were never on that sensipsych couch for very long, or too often. You would wake up, and there was Mom saying, "Enough, fella. A little of that sort of thing goes a great way, even when the experiences are rugged and educational and not just whimsical nonsense."

Ed Dukas would be angry and puzzled. For it had seemed that those visions, going on without end, could bring joy forever.

"You'll understand sometime, Eddie," his mother would say, consoling him. "What happens to you by sensipsych is just make-believe. What we call recorded sensory experience. Some of it really happened to other people. Some of it is just made up. It can teach you things. But too much is very bad. Not so long ago folks found out."

There was something tender and hard and even scared in his mother's words.

Ed's dad also had his comments. Dad was something called a minerals expert.

"Come on, Eddie, let's rattle," he'd say. "Stick your chin out, boy. Let's see how tough you can look. No, not mean-tough. . . . That's better. We've got to lick the times we live in. And something in ourselves. With machines doing so much for us, life can be soft. And sensipsych dreams are soft. Everything in moderation. Dreams can make you feel as helpless as an oyster. Until you despise yourself and the whole race. Yes, people found out. They were always meant to feel strong and proud, and they must have tasks equal to their increasing powers. Otherwise there's spiritual rot. We've got to be ready for anything, feel our way, try to be ready to keep our balance for whatever comes. Because life could be terrible, too, if the wonderful forces we control got out of hand. We've got to go on progressing—moving out to the planets, and then maybe the stars. Got to go either ahead or backward. Can't stand still. And it's easy to go backward nowadays. Got to fight that, Eddie, or else there might be a kind of death."

"What is death, Dad?"

Ed's father would answer his son's serious expression with a gay grin. "A kind of myth, now, boy. Just going to sleep and never waking up. We hope it's mostly finished, for everybody. Even the disease of old age turned out to be something like rust gathering in a pipe. Simple. It can be fixed up. Some people even let themselves get old. But they can be made young again. Always."

Eddie had other questions.

"You were born in the old way, Eddie," his mother said. "But *so many* people are needed now to populate the solar system. So everybody can't be born from his mother's body. There's another way; almost the same, really. Babies are

born—they're made, really—in a laboratory. Then they live in a youth center, like the one on the hill."

Eddie saw its great white spire looming among the trees. Often he could hear voices in the gardens and playgrounds on the terraced setbacks of its many levels. The voices seemed mysterious somehow.

Even then Eddie sensed the groping and confusion that was in his parents' minds. Sometimes his mother would speak fervently to his father: "Jack, I'd never choose to live in another age. I love it. Because it's rich, endlessly varied, exciting. Is that why I'm often scared out of my wits? Even disgusted often enough with my selfish self and all the automatic devices? I love my work, the planning of pleasant interiors. I'm so busy there doesn't even seem to be time for another child. Yet maybe there are centuries ahead, Jack. How does one fill centuries without getting fed up? And are we supposed to be something superhuman in the end? Or do we wind up like the ancient Martians and the beings of the Asteroid Planet, before it was blown to millions of pieces? Wiped out in super-conflict, before they could progress very much further than we are now?"

Most of this went over Eddie's head. But it left a smoky tension to lurk in his mind behind the peaceful presence of sun and trees. People had made their world more beautiful for their own relaxed enjoyment. Yet even in those days Eddie sensed the turbulent undercurrent deep inside them.

Once his father expressed a vagrant thought: "Maybe we should go out to Venus sometime, Eileen. Start life over more simply in an uncrowded planet that's being conditioned to receive our ancient race. Maybe we'll do it in just a few years." He grinned.

"Yes," Eddie's mother replied. "If being indefinitely young and alive doesn't fool us before then. If our complicated civilization doesn't crack open and spit fire, and vaporize everybody. Death by violence is still definitely possible. You know, lots of our friends are getting their bodies and minds

recorded so that they can be restored in case of serious injury. Maybe we should have done it long ago."

Jack Dukas met her concern with a light tease: "A woman's worry matched against the stubbornness of a man—eh, Eileen? There's something unnatural about being recorded that I rebel against. Don't be too troubled, though. The centuries won't slip from our fingers so immediately. I hardly ever touch a dangerous thing in my work. Besides, safety devices are almost perfect."

Such serious, troubled thoughts did not dim the optimism and eagerness of young Ed Dukas. His private dreams soared into the thrills of Someday. His small hands were impatient to grasp the shadowy shapes of the future, more legendary than the not-distant past with its still-living heroes: Roland, who was largely responsible for the rejuvenation process; Schaeffer, who developed the sensipsych, brought on the dream-world period of decay, and in the end helped Harwell defeat the trap of emasculating visions by urging mankind back toward a vigorous grip on reality; and the hundreds of others who had taken part.

But the first visit of Mitchell Prell, when Ed Dukas was five, was, to the boy, like acquaintance with a legend. "Hi, Nipper!" were the first words his uncle had spoken to Eddie. Dr. Mitchell Prell was his mother's brother. He was a much smaller man than Eddie's dad, and dark instead of blond. He was famous. And he brought gifts.

"A piece of the Moon, Nipper," he said. "An opal imbedded naturally in gold. For your mom. And this case of instruments dug up in Martian ruins, for your dad. Fifty million years old but better than anything designed by human beings for locating ores far underground. And this for you—also from Mars. I haven't been there for a long time. But I got an old friend to send me the stuff—to the labs on the Moon."

Maybe Eddie's gift had once been a toy for the off-spring of extinct Martian monsters. It was triangular like a kite,

metallic, with a faint lavender sheen. When you whistled a certain way, a jet of air made it rise high in the sky. But it always came back. Atomic power was in it somewhere. For it never ran out of energy.

Uncle Mitch never seemed to say much. He didn't get deep into philosophy. He set up queer apparatus in his room, and a kid could look at it if he didn't touch. And to one of Dad's questions he answered briefly, "Yes, we're making headway in the labs on the Moon. There'll be a motor for star ships. If, in our experiments, hyperspace itself doesn't burst at the seams under that level of power. No, we're not yet trying for speeds of more than a fraction of that of light. A trip to a star will take a long time."

It soon came out that Uncle Mitch had another interest. He kept in a glass tube something that squirmed and wriggled, and felt like warm flesh though its natural form, when at rest, was a slender cylinder of pencil size.

About that he would only say, "Call it alive if you want to. But not like us. Invented and artificial, and far more rugged than our flesh. For the rest, wait and see if anything comes of it. Maybe it'll become the clay of the superman. Schaeffer, here on Earth, is working on it, too."

Uncle Mitch stayed for a week. Then he was gone, rocketing out to the labs, isolated for safety at the center of a *mare* on the always hidden hemisphere of the Moon.

"Mitch knows what he wants and is direct about it" was Jack Dukas's comment. "Simple. No conflicts. The scientist's approach. Wise or stupid? Who knows?"

Eddie was six, and then seven. The years moved slowly, but he grew and hardened with them. By the time he was twelve, sports and study and awareness of realities had toughened his body and matured his soul considerably. That was fortunate, for this was his and mankind's fateful year. The day came when the household robots were fixing up the guestroom specially for Uncle Mitch again. Dad was afield, a hundred miles away, to look over a vein of quartz crystal

that was to be shipped to the lunar laboratories. At 9:00 P.M. Eddie's father had not yet returned.

Eddie was sprawled on his bed looking lazily at the translucent blue font of the lamp beside it. The color was rich and beautiful, the carvings snaky and odd. Here was another gift, ordered by Uncle Mitch from a friend in the region of the Asteroids. The font was an artifact of a race contemporary with the Martians who had also lost their fight to master nature and themselves through knowledge. The font had been found floating free in space, among the wreckage of a planet blown to pieces ages back.

Eddie was thinking of such things. He was also thinking of neighborhood pals, to whom he had bragged about his uncle and his expected arrival.

As for what happened at that moment: there *was* transpatial warning, radioed out fifteen seconds ahead, telling of forces gone hopelessly out of control in the lunar laboratories. But Eddie's set was not functioning, and he did not hear it.

Beyond the windows of his room there was just calm, pale moonlight. The Moon looked little different than it always looked, except for the blue spots of the atmosphere domes of the great mining centers.

But then came the intolerable blue-white light. Perhaps, somewhere, exposed instruments measured its intensity. On the roofs of meteorological stations, maybe. Say conservatively that, for the space of a few seconds, it was five hundred times as strong as full sunshine.

Night was broken off. But there was no day like this. For one fragment of a second Eddie glanced at the window. Shadows seemed gone, utterly. Even dark things like tree trunks reflected so much light that they all but vanished in the shimmering glare. As yet, it was a soundless phenomenon.

Eddie shut his eyes and buried his face in his pillow. This reflex action, partly as natural as terror and partly the result of training for emergencies at school, saved his vision. He might have screamed, had he been able to find his voice.

Distantly, he heard human sounds that increased the sickness in his stomach. A gentle scene and mood, product of science, had been utterly shattered by forces of the same origin.

He did not see the fuzzy blob of incandescence that bloomed in the sky and expanded slowly for many seconds. In fact, no one saw it; only cameras, fitted with special dark filters, would have been able to do so. For living eyes would have been charred by that splendor.

He heard his mother calling his name. Keeping his eyelids tightly closed and an elbow bent over them, he fumbled his way to the hall, and to her. They dropped to the floor and huddled there.

Outside, voices died away. By then the devilish glory in the sky was fading a little, too, at the edges. Only the heart of the great blob still blazed supernally, with its millions of degrees of heat. Around it was a cooling fog of dust and gases that masked the hell within it.

The world grew still for a few moments, as it does at the center of a typhoon. Then there was a great, soft roaring. The shock wave of expanded, rarefied gases, speeding at many hundreds of miles per second, striking the upper terrestrial atmosphere, and pressing down. Eddie could feel the pressure of it, transmitted by the air—a light but definite punching inward of his flesh, from all sides.

Then there was a distant sighing of wind—air, superheated and compressed, being forced outward. Next came the resurgence of human sounds, if they were truly that any more.

Someone was yelling, "Oh, God . . . Oh, God . . . Oh, God . . ." There was a crackle and smell of fire. Something blew up far off.

Then the earthquakes began. With a sharp snap, rock strata far underground broke. Then came a jolt. Eddie Dukas and his mother, huddled on the floor, were engulfed in a swaying sensation, smooth and vibrationless. Then the

ground quivered softly. After that, there was a pause, as of something hanging precariously for a moment at the jagged lip of a chasm. Suddenly the pathetic hold seemed to be broken, and the whole world was seized by a tooth-cracking chatter. A pause . . . Then it began again.

For a second Eddie's mother almost lost her control. She tried to rise. "The house!" she stammered. "It'll fall on us."

Panic and reason fought inside Eddie. "No, Mom," he gasped. "The house has a steel frame. It'll probably hold together. Outside, we don't know what would happen to us."

They both braced themselves for the next seismic burst. They were both creatures of luxury, science-made. But planning, training, psychology—science it all was, too—had given them ruggedness and courage, a reserve of strength against hysteria—while the earth rattled again and again.

Eddie's mom kept saying things, and it was all something like a formula that had been learned, a rote, a parroted incantation: "You're right, Eddie. We've got to think before we do anything. They always tell us that life is an adventure. We've got to meet a bigger future or be destroyed, Eddie. Everything takes nerve."

At last the earthquake shocks lessened both in intensity and frequency. Maybe the worst was over.

Eddie risk an eye, and then nudged his mother.

Beyond the undamaged flexoglass of the windows night had returned, red-lit from both sky and ground. The firmament was smeared with a ruddy glow extending in a great curve, beaded with more intense blobs at several points. Dust of the Moon, it had to be. Of its rock and pumice shell. And of its core of meteoric iron. But that sullen effulgence was fading now, as matter cooled and began simply to reflect solar light back to this dark side of Earth.

Yet everywhere outside there was fire. The towering glow in the east—that would be the City, fifty miles away. Destruction and confusion there would be unimaginable. Nearer at hand, trees were aflame—leaves and branches that minutes

ago had been cool with greenness now blazed wildly. Mixed with the tumult of voices was the clang of robot fire units.

Eddie rushed to the radio and turned it on, as he had been taught to do in emergencies. You listened; you obeyed directions. ". . . lunar blowup," someone was saying. "Follow the usual precautions and measures for radioactive contamination and flesh burns. Rescue and relief units are already in action. Fortunately most of our buildings are not made of combustible materials. . . ."

For minutes Eddie was furiously busy, rubbing special salves and lotions into the skin of his entire body. Then, dressed in fresh clothes, he and his mother just stared out of the windows for a while. Outside, metal shapes were at work. Science and civilization were working efficiently to recapture their balance after an upset that might have been the end.

Eddie and his mother explored the house and found it mostly intact. Then incident piled on incident in quick succession. The first of these began with a whimper at the door. Masked with respirators against possible radioactive taints in the outside air, they opened it. A blackened thing without eyes dragged itself inside, quivered once, and lay still. It was death among supposed immortals. The passing of a dachshund called Schnitz.

Eddie was dazed. Child-grief or man-grief had no chance to come to him then. Events moved too fast. There was too much to be done.

A half-dozen people in radiation armor came into the house. At once it was converted into a first-aid station. Hard law and hard drills, blueprinted long before for disaster, came into play. Eddie's mother joined the crew. Nor was he left out of it. There was coffee for him to prepare in the kitchen, and rugs and furniture to be cleared away, and equipment to be set up.

He saw blood and death, and hysteria-twisted faces. He saw glinting, complex instruments and apparatus, as the

therapeutic methods of the age were applied. There were blood pumps that could serve as hearts and machines to duplicate the functions of kidneys and lungs. There were devices to teleport scattered body cells from a dozen healthy individuals, converting them briefly into mobile energy, and then back into living tissue in the body of an injured person.

Mostly the maimed and burned remained stolid and calm. Luxury had not weakened them. They, too, had known their era and had had some preparation.

Eddie recognized a child of his own age among those who came into his own house: a neighbor boy named Les Payten, the son of a noted biologist. He had big ears and a freckled nose. He wasn't hurt badly. His eyes were inflamed. He hadn't shut them quite quickly enough. He had turned sul- len, and his lip trembled a bit. Otherwise he was still full of pepper.

"Braggin' about your Uncle Mitch *now*, Eddie?" he taunted. "Great stuff, that guy! He and his pal scientists nearly got us all. Better luck next time, huh?"

Young Ed Dukas might have growled back but he did not. As if he too carried a burden of responsibility, his jaw hardened and his cheeks hollowed. His back stiffened, as if to bear the load. He returned to the kitchen. He had not yet noticed any other signs of blame. It was too soon. The shock of cosmic catastrophe had deadened minds. Sometimes prejudice and hatred need a certain leisurely brooding to build them up.

But another raw realization had come to Eddie. As soon as there was a moment to speak to his mother he said, "Uncle Mitch was supposed to land in the City spaceport tonight. It's a six-hour run from the Moon. But now he'll never get here."

She shook her head. And in her expression there was fury mixed with her sadness.

He didn't think about that very long as he helped carry a stretcher. His mind was on Mitchell Prell—grinning, setting

up a lab in the room upstairs, even modeling wax with his swift fingers. He had once molded little heads of Mom and Dad. A lump gathered in Eddie's throat for someone who would never be back. Mitchell Prell. Even the name sounded nice.

Then slowly another question came into his mind. *Where was Dad?* He'd gone out to that quartz lode and hadn't come back! Funny, thought Eddie, I hadn't even thought about that. Well, it came from taking Dad for granted. Someone never to worry about. Someone always around, like the hills. Eddie clenched his fists to steady himself. No use worrying yet.

Now the torrential rains began. Steam had been boiled out of the ground by heat. Now it was condensing. Helping, maybe, as the radio said, to wash away the poison of the radioactive meteorites and dust that were falling to Earth—wreckage that hours before had been part of the Moon.

Somewhere out in the moaning storm a bell chimed out ten o'clock very calmly. It must have been about then that what was left of Jack Dukas was brought home in a truck. Eddie didn't see this happen. He was helping again with the injured. And later, when Les Payten told him, Mom wouldn't let him go into the locked room where his dad had been taken. He almost told her that he had a right. But he did not want to disturb her further.

Eddie was up till 4:00 A.M. By then the rescue crew had left the house and a tentative calm had been restored in the world. The injured were in hospitals, rigged in tents and public buildings. But there were far more dead. Anyone caught more than a step from shelter when the catastrophe had occurred was apt to belong to that endless list. Half a planet had been scorched by heat and radiation.

While the guard-robots rumbled through the rain on their caterpillar treads, Eddie simply passed out from weariness on the floor of the living room. His mother managed to arouse him a little but not enough to send him to bed. Rath-

er, she folded down the twin couches from the sensipsych set. She made her husky young son climb up onto one of them and took the other for herself.

He slept, and his body was refreshed. And he had dreams—not dreams in which he was an imaginary cartoon character; nor was he toiling to make dead asteroids habitable; nor was he enjoying an adventure on some imaginary planet among the stars. No, for the present he had had enough of strain. Instead he lay in grass by a little lake. The sun was bright. There were boats with colored sails, and blue flamingos flying, and odd, elfin music. The sensipsych was not an opiate to fill the emptiness of soft lives now. It was rest; it was honest, relieving therapy.

Young Ed Dukas didn't see the mud-spattered truck arrive, to be parked some distance from the house. He did not see the figure moving in the dense shadows. It knocked cautiously at the front door, waited for a reasonable time, and then went around to the porch in the rear. There skillful fingers worked carefully to release the lock. Massive luggage was lifted without sound inside the door.

Eddie awoke with a small, hard hand shaking his shoulder. His mother was already awake. The light was on. At first only with simple unbelief, they beheld a slight, disheveled figure.

Uncle Mitch's cheek was scraped. His hands were filthy. His recently neat business suit was torn. An old jauntiness about his eyes fought with worry, regret and wariness.

"Hello, Eileen," he said. "Hi, Nipper."

He received no answer. Somehow even Eddie felt compelled to silence. So his uncle shifted to what was a rarity with him—a kind of historical or philosophical summary.

"Progress," he said with a forced laugh. "The world government answering the threat of atomic war, years ago. Then the greatest boon of the human race: eternal youth, and death's defeat except by violence, producing the problem of overpopulation, to be relieved by the colonization of the solar

system. Then peace and boredom and the sensipsych dreams leading to decadence, loss of pride in self and even rebellious violence; then the solution of vigorous, realistic action, more and more people to enjoy life, more and more colonies. Then, as we reach out for the stars, this. Life. The great adventure that can't be stopped. The rise from barbarism. Is it even well begun?"

His words, half appropriate and half in supremely bad taste now, as Mitchell Prell well knew—though he had to say them because of the need to say something—still fell into a void of silence and echoed through the house like a cheap speech.

Sighing raggedly, he tried again: "Yes, I'm alive, Eileen. The ship from the Moon was in space before the blowup happened. We rode ahead of the main shock wave at high speed. So we won through. From the final warning message from the Moon, I gather that trouble started in the warp chambers. The heat and pressure were restrained by the tight space warp for a while, until inter-dimensional barriers ripped wide open. The whole mass of the Moon was in the way. By old standards it couldn't happen; but a lot of lunar atoms went all to pieces in a flare of high energy. The tough part is that we achieved a workable motor principle for stellar ships weeks ago. The blowup came from side line testing."

Once more no words answered Mitchell Prell when he stopped talking. He waited, but his sister's eyes remained cold.

"All right, Eileen," he went on at last. "You're thinking that I am one of the specialists who is responsible for this. Surely I'm the only survivor among those research men who were on the Moon. But remember this: we weren't working on our own. We were hired, under a democratic system, and told what to hunt for. It was the best that could be done, except that the lab should have been put farther away, on some lonely asteroid. Logically, then, we are not solely to

blame for what has happened. But it doesn't work that way, Eileen. Under grief and hysteria logic still collapses, even in our time. In a real crisis there continue to be many people who need scapegoats. A collective mishap, the result of a mass desire for more knowledge, then becomes a personal guilt. So I'm a fugitive, Eileen."

It was a strange, bitter thing for Eddie Dukas to watch—his mother and uncle facing each other, not friends, his mother's face a hard mask of coldness.

Then, all at once, her icy poise crumbled. "Jack isn't alive any more," she said. "My husband. That's the fact that I know best. You with your glib talk, my brother, are one person directly in the chain of events that caused Jack's death. I don't accuse you, Mitch. I just say that I can't look on you now with any pleasure. That's all."

Then, sitting there on the sensipsych couch, she began to cry. It was painful for Eddie to watch. He had never seen her do that before.

But Mitchell Prell chuckled. He sat beside his sister and put his arm around her. "Are things so bad?" he chided. "Look, Eileen. People used to consider biological life the deepest secret of nature. Because he was at the top of his local life scale, man would not have been flattered to know that the vital force in him wasn't the greatest, the most indecipherable of enigmas. But it's true, Eileen. Year after year we've learned more about cell function, genes, chromosomes, the natural molding of living things, and the final process in protoplasm, which is the spark itself. Men like Schaeffer have been making simple life for years, while they traced out more complex riddles. For a long time they've been replacing diseased or damaged organs from scattered cells drawn from the bodies of many donors. Now they've gone further and have grown such organs in a culture fluid, from a microscopic bit of tissue. It is already theoretically possible to re-create an entire man, provided there is a pattern. It was for repair purposes, after possible accidents, that everyone was urged

to have his body structure recorded—especially that of his brain. All you have to do, Eileen, is have Jack's record turned over to the same laboratories that do rejuvenation. In two or three years he'll come back to you just as he was. Soon there might even be a simpler, better way."

Eileen Dukas's laugh was brittle and bitter. "A roll of fine, sensitized wire," she said. "Kept in a box no bigger than the first joint of a finger. Supposed to be safe in a vault. The pattern of a human being. Well, Mitch, there just isn't any such box for Jack. Or for Eddie or me either, for that matter. We just didn't get around to it. Jack was somehow half against it."

Again there was a silence. For Eddie it seemed to have the quiet of forever in it. No whistling of Dad's tunes. No sly winks, or play at being tough. Just memory.

"All bodies that are being picked up are being sent through the recorder," Uncle Mitch offered at last. "Refined radar does the trick. The finest variations of even brain structure—the mold of mind, personality, and memory—are found and recorded. Wasn't that done for Jack?"

Eddie's mother nodded. "Only" she stammered, "the whole top of his head was charred. There wasn't enough of him left. Oh, you and your damned science, Mitch."

She was weeping again. Mitchel Prell became either cruel or perhaps he spoke in self-defense.

"The people that used to neglect things like insurance," he remarked, "are still plentiful, aren't they? Oh, well, maybe there's still a sort of way. A makeshift. People are bound to think of it. Let it go for now. I've got lots to worry about, sister of mine."

"Your own skin, for instance?" she challenged him. "Why did you come here at all, Mitch? The scapegoat-seekers will certainly look for you here first."

"My own skin," Mitchel Prell agreed. "Maybe yours, since you are a relative of mine, responsible for my sins. That is an ancient defect of logic among certain types of

people still in existence, I'm afraid—if the provocation becomes great enough. The skins of the three of us, my most prized treasures."

He smiled slightly then, and his blue eyes were gentle. "Don't worry too much, though," he went on. "I'll be gone sooner than most people will even think of looking for me. I'll keep out of sight, not even leaving the house, except after dark. I have some things to deliver to Schaeffer. Then I've got to get away. Because life goes on, in spite of everything. I'm still curious about nature, the stars and some other things. I remain eager for some vast freedom, Eileen—for you and your son, and the rest of the cussed race, whose errant qualities and usually good intentions I share. I see no good in becoming the offering of expiation for an accident that came out of a general human urge to learn that can't and won't be downed."

Something like a truce came then. Eddie Dukas could feel it. Family loyalty was in it and a little of understanding and contrition.

"All right, Mitch" was all that Eddie's mother said. She kissed his uncle's cheek. Eddie knew that it was a woman's gesture of armistice.

Fires had died down. Dawn was beginning to show in the patio. The rain had stopped long ago. For no reason Eddie's eyes sought out a pool of muddy water in a crack in the flagging. The water was clay colored, as it might have been after any shower. A robin, which had somehow escaped death, was scolding angrily.

Breakfast was eaten listlessly. There were radio reports and orders. "Able persons must report to their municipal centers. . . ."

"That's for you, Eddie," Mitchell Prell said ruefully. "And your mother. While I play hiding rat."

Eddie didn't know whether to hate his uncle or not. There was an inner bigness about that slightly built man

that matched some obscure drive that was Eddie's own—in spite of his grief.

"Watch yourself, sir," he growled stiffly.

The day was a day of searching for corpses, of cleanup, of tentative restoration. At least there would be no smells of death. Pruning machines were already busy on charred treetops. The world was being put back into order, like a disturbed anthill. Grass and leaves would sprout again. The scared faces of younger children—many from the Youth Center were given small tasks to help in the cleanup, since it was not the custom now to hide reality from the young—would smile again. On that day of sweeping the streets with a broom, Eddie Dukas made and lost many a brief friendship. Hello . . . Goodbye . . .

Fortunately the poison of radioactivity had not been transmitted to any great extent from across space by radiation alone. Gases and fragments of the Moon that were still falling as meteors bore a taint to the atmosphere; but it was now below the danger level.

Overhead, arching the sky like the Rings of Saturn turned ragged, was what was left of Luna: rock and dust. For an hour its texture veiled the sun, until, near noon, there was almost twilight, like that of an eclipse. That arch was a permanent monument to a night that would be remembered.

There still were hysterical people around. Eddie saw Mrs. Payten, his friend's mother. She passed in the street, muttering, "Oh, Ronald, you were a beast of a man, but I loved you. Why were you a fool, too? . . . No record . . . None . . ."

It had been a subject of neighborhood gossip that Ronald Payten, a large, passive lug, had been a very much hen-pecked husband. His neglect of having a record made of himself might have seemed strange for so noted a biologist. Maybe it was absent-mindedness, professional difference of opinion, or even some backhanded defiance of his wife.

There were moments when the wild taint in young blood and the magnificence of disaster gave Eddie and others almost an outing mood. But toil, sweat and horror soon turned things grim as he worked with the men. His hands were blackened and scratched. But maybe tiredness was balm for delayed shock. Maybe it was thus that he stood at the brief funeral services—for his father, too—with less hurt. The great trench was closed over the corpses, and the thing was done.

Later, back in the house, he struggled with himself somewhat, and said, "I know it wasn't your fault, Uncle Mitch."

Eddie had seen stern faces that day, topping trim gray uniforms: regional police. In him was the thought: Harboring a fugitive. One who shouldn't be called that. But who is—now. Because people have taken a beating like never before. Even laws can be changed. Ideas of justice won't stay quite the same.

"Have you outgrown my calling you Nipper?" Mitchell Prell asked him seriously. "Perhaps . . . But I still want to show you something."

Young Ed Dukas was no sucker for easy come-ons. But his polite wariness soon dissolved, when, in the room where Mitchell Prell was holed up, he saw that the man who turned to face him was not his uncle. The nose and lips were much heavier. Only the eyes and grin remained much the same, though their general effect was made different by the difference of surrounding features. This man looked like a good-natured mechanic.

Eddie's spine chilled. But he gave a sullen snort as the man peeled his face away. Underneath it was Uncle Mitch.

"A mask, Eddie. A trick for kids, you'd say." His uncle laughed. "I spent the day making it up, to help me get around more easily. That's nothing. The important fact is that it is made of vitaplasm. Remember the bar of it that I once had? Crude stuff then. Better now. Alive in a way of its own. A synthetic and far tougher cousin to natural protoplasm. Far less susceptible to damage by heat

and cold. Self-healing, like flesh. Sustained by food and oxygen. But capable of drawing its energy from sunlight or radioactivity, too. And in some of its forms less dependent on a fluid base such as water. No, it's not consistently the same substance, or combination. Like the flesh we know, vitaplasm is in constant change. Here and now it's just an amorphous mass, crudely molded. An unshaped building material. But, like star ships, it belongs to the future. Here it's undeveloped principle, another phase of our advancing science everywhere. You could call it the clay of the superman, Eddie. I want you to remember all this. Because I may be back from where I'm going to try to go. Or I might get in touch sometime. We might need each other's help."

Young Ed Dukas listened with intense interest. Perhaps his deepest drive was toward the shadowy splendor of times yet to come. They seemed a part of his growing self. They must become real! And he must take part in their fulfillment. Grief or hardship could not stop him. Therein he and Mitchell Prell traveled the same road.

"You didn't invent vitaplasm, Uncle Mitch," he stated. "No one could have—alone."

His sullenly serious gaze lingered on the mask. It was warm to his touch. It even recoiled a little.

Mitchell Prell shook his head and chortled. "No, Nipper. You know that research is now far too complex for that. I helped a little. Lots of men did. Maybe I've added something to what is known. I've got to give my data to specialists here before I leave."

Eddie thought of a man he'd sometimes seen on television. No bigger than Uncle Mitch. And plain looking. But great. Dr. Schaeffer in his underground laboratory in the City.

"You aren't going to try to reach a star, are you?" young Ed asked.

Uncle Mitch shook his head. "No. I won't wander so far off." He laughed. "But in a way I'll be going farther, I sup-

pose. Though don't imagine that I mean time or hyper-dimensional travel. It's something simpler. But it's to a place where no one can journey exactly as a human being. I can't tell you much more. Because I don't want other people to try to dig too much out of you. But I want to look at things from a new angle. And from very close up, you might say. Maybe I'm trying to hide from danger, Eddie. Some. But the bigger reason is that I want to go on learning and exploring. Maybe my being a small man means something, too."

Mitchell Prell ended with another light laugh. He put the mask in his pocket and snapped a large suitcase shut. When he spoke again it was on a slightly different tack: "You probably won't see me for a while, Eddie. About your father, words just aren't any good at all. Maybe I'll ache over his end even harder than you. If anybody asks you questions about me, tell all you know. Don't try to hide anything for my sake. They'll pry it out of you anyway. And they'll only know what I want them to know.

"Your mother may get a letter in a few days asking you both to report to the City. If that letter comes, see that she conforms to its request. It will also mean that I've delivered the results of my experiments with vitaplasm, as far as they've gone, into the proper hands and have probably succeeded in getting away into space. I hope that you and I and everybody make it to the Big Future, Eddie. That's all I have to say. Unless you care to remember a word that may crop up again—*android*."

Mitchell Prell grinned reassuringly at his nephew and moved to put on his mask.

"You don't want to say goodbye to Mom," Eddie stated, half angrily.

Prell's look of concern deepened. His thin face was touched by a fleeting tenderness and worry. Part of it was surely for his sister. Then, mostly to himself, he muttered, "There's greater magnificence to come—if we can grow past the infancy of man; if new knowledge and old wild impulses don't

do us all to death first." He chuckled sheepishly. "You say goodbye for me, Eddie," he urged. "I hate things like that."

Mitchell Prell was gone then, out into the weird new night. Grimly, already half a man, young Ed Dukas watched him go, bitterness and grief, hatred and love, mixed up inside him. But the common denominator between himself and his uncle was the need for that future of stars and wonder and legendary betterment.

"It *will* happen," he promised within himself. For a second his body was taut with dread. He had already experienced the fury that knowledge made possible, and he could sense the potential of long silence beyond such things—no one left, anywhere! He wondered if, because life could go on and on now, it was more precious and death more terrible.

Fifteen minutes after his uncle's departure a spy beam was put into operation from a mile distance. It covered the rooms of the Dukas house and the grounds around it. The principle of the device was almost ancient. The reflection of electromagnetic waves. On a small screen in a distant room the plan of a house and its furnishings was outlined in a pale green glow. Shadowy blobs shifted with the movements of its occupants, robot and human. Only two people were there now.

Eddie Dukas guessed that the spy beam was there, though its irregularly changing wave length would have made it almost impossible to identify, among the waves from many sources used for communication.

Early on the third morning after the lunar blowup the police came to the house. They were very gentle. There was even a policewoman to ask the questions.

Eddie's mother was cool and wary.

"Have you information as to the whereabouts of Dr. Mitchell Prell, Mrs. Dukas?" she was asked. "We know that the last Moon rocket landed with him aboard."

Before she could lie Eddie blurted, "He was here all that day. He's gone now. He didn't make his destination very clear."

Eileen Dukas's eyes widened with panic and surprise. She had expected Eddie to be more discreet.

"You have no right to question my son!" she stated coldly.

"Mrs. Dukas," she was informed, "when there is an investigation of the deaths of two hundred million people, we have more than the right to question anybody."

Young Ed was scared. But he felt some of the hero-impulse. Or the desire to follow faithfully the instructions of his idol, Uncle Mitch.

"If you psych my memory, what little I know will come clearer than if I just told it," he challenged.

This was done forthwith, out in the police car parked in the street. When the helmet of the apparatus was removed from Eddie's head, the police had certain comments of Mitchell Prell's to study. Possibly they could puzzle out some of their hidden meaning. But this couldn't have satisfied them very much.

The next day the letter Prell had mentioned arrived. At least it could be assumed that it was the one. Uncle Mitch had managed to make one step of his purpose anyway! Under the heading of "Vital Section, Schaeffer Laboratories," it said:

MRS. DUKAS:

Will you kindly report at your earliest convenience to the above section. This is of greatest importance. Please bring your son.

Sincerely,
DR. M. BART

Ed was both cold with tension and hot with eagerness. The following day he and his mother were in the battered City. Fire had scarred it. A boiling tidal wave had washed over portions of it. But the great building over the many subterranean levels of the Schaeffer Labs had stood firm. Quakes had not broken it down.

An elevator took them below, to that steel- and lead- and concrete-shielded place which might have resisted for a while even a noval outburst of the sun. They were requested to lie down on something like sensipsych couches. A voice—maybe Dr. Bart’s—spoke to them from a swift-gathering dream: “Think about Jack Dukas. Your husband. Your father. Things he said. His manner of speech. His expressions, gestures, temperament, likes and dislikes, hobbies, jokes, skills. The people that he knew. Their faces and mannerisms. As many of them as possible will be contacted and psychéd like this, too. Think of his memories told to you. Think of everything . . . everything . . . everything. . . .”

For Eileen Dukas it must have been much the same as for her son. Pearly haze seemed to float inside Eddie’s mind. Like a million bits of ancient news clippings always in motion, his recollections of his father seemed to burst in a thousand ever-shifting fragments within his brain. He felt an awful compulsion to recall. It sapped his strength until all consciousness faded away. Yet before this happened he knew that the probing would go on and on.

The next thing he knew he was sitting groggily in a pneumatic tube train, with his mother, all but exhausted, too, leaning against him. Almost as an afterthought, their own minds and bodies had been “recorded” there at the laboratory. They seldom exchanged questions or speculations afterward about what had happened to them. It had been a dream. Let it be a dream.

II

LIFE had become hard enough for Eileen Dukas and her son. While most people treated them all right—from some they even received exaggerated kindness—there was, very often, a certain disturbing expression in eyes that looked at them.

Les Payten, Eddie's friend said once, "I promise, Ed. No more talk about your uncle from me. Finished, see? You've had enough."

Eddie suppressed the anger which sprang from loyalty to Mitchell Prell, for he understood Les Payten's good intentions.

At regular intervals there were police visits at the house, and questioning. "It's partly for your protection, Mrs. Dukas" was one honest comment from the detectives. But Eddie sensed that there was more to it than that. Subtly, the interpretation of law had changed since the lunar blowup. It went backward, as grief sought people to blame. Catastrophe had been too big for reason or fairness. And the scapegoat himself was not around to be mobbed.

A freckle-faced brat from the Youth Center—her name, Barbara Day, had been drawn out of a hat, for of course she had no known parents—offered advice: "You ought to go far away, Eddie, where folks don't know you. It would be better."

Ed knew that this was good advice. Many people were saying and shouting and whispering that too much knowledge was a dangerous possession. And Ed's uncle still represented such a thing. More than once Ed had to run fast, with some big lug chasing him. Black eyes he collected with great frequency, and delivered some, too. Still, he ached inside. It was as if Uncle Mitch were part of him.

The world began to look normal and green again. But the undercurrents of memory were still there. And Ed Dukas began to answer hate with hate, though he didn't like to.

There was a crowd of young toughs with rocks to throw, in front of the house one night. "This is the place," Eddie heard one of them say. "Both my parents are gone. And the bums that live here were in on the reason."

Ed had seen the boy around before: Ash Parker. Now the rocks flew for a while, and Ed and his mother crouched behind locked doors. There might have been a lynching, ex-

cept that Les Payten found a neighbor with a tear-gas vial and some other neighbors with sharp tongues and courage.

It was the final straw, however. "Will we have to leave, Eddie?" his mother asked.

"It's best," he growled. "But I'll be back!"

Next day the house was being boarded up. Packing began even before the colonial travel permits were prepared.

It was goodbye to Les Payten and Barbara Day, and the newly ringed planet, Earth, with its billions of inhabitants and its great shops that still worked to give the whole solar system to mankind and maybe a segment of the larger universe as well. The pattern of the future seemed set, and specialists still didn't think that there was any real reason to make a change. In fact, they denied that any change was possible. Nobody would give up the threshold of immortality, once it was gained. Nor would they relinquish other triumphs that could bring idleness and decay if they were not used to accomplish bigger and bigger tasks. So, even the fearful ones were caught in the rushing current of the times.

Ed Dukas was soon on a crowded liner. Because she might need him, he kept close to his mother. Around them were other colonists—young graduates from technical schools, newlyweds and people who were physically young, too, though they were fresh from the rejuvenation vats. They were the aged, awed by another lifetime before them.

The liner blasted off. A week later it landed on an asteroid of middling size. The Dukases were assigned to one of a group of trim cottages that were not even all alike. Under the great glass roof, which kept in the synthetic air, the new gardens and fruit trees were already growing. And in coiled tubes of clear plastic filled with water, circulated green algae from which almost any kind of basic food could be made.

To Eddie it was a satisfying dip into space that he had so much anticipated. Amid great heaps of steel and plastic and house parts and atomic machines to maintain a normal

temperature so far from the sun, life went on. Eddie's mother worked in the office of a shop for robot machines. He worked too—when and where he could—when he was not at school.

There was a little more of peace, for a while anyway. There was the usual psychological treatment to subdue possible devils of the lunar catastrophe which might remain in his mind. There were sports and an artificial lake to swim in with his companions. However, Ed Dukas was wary of making deep friendships.

He was then a sullen, overly matured youth of thirteen, earnest about everything he did—for he knew that the years ahead were grimly earnest. Carefully he kept up with the reports in scientific journals: about the laying of the keel of the first star ship on a minute asteroid with only a number and no name. Harwell was in charge. The propellant would be pure radiant energy—the best of them all; energy so concentrated that it would be truly massive and hurled at the speed of light, which was not remarkable, since it *would* be light, far more intense per unit area than the noval explosion of a star!

This was by no means the only major advance that had been accomplished and was reported. Technological progress was steady in all fields, across the board, making a solid front. Others of its facets also had a special appeal to Ed Dukas. Biological science, in its newest interpretations, he knew to be the most important of these. Now it was no longer just simple rejuvenation—restoring rusty organs. It was a thing that could start from a single cell, in warm, sticky fluids, giving rebirth to something that had already been. And it had a further development—bringing the same results but more swiftly and easily, and with different, far more rugged flesh. It was frightening and fascinating. Knowing was like feeling the shadow of a demon or an angel.

Ed Dukas and his mother spent four years on their asteroid. Then one day a letter fluttered in her hand. And she

seemed not to know whether to look happy or terrified. She did not show her son the letter.

"We've had enough of being here," she stated. "We're going home."

So they went back across the millions of miles. They cleaned up the house, on which obscene insults had been scribbled in chalk. On two successive days Eddie was jumped by gangs. He fought free and escaped. But on the third evening he was cornered. This time Ash Parker was the ringleader. Ed battled like a bobcat, but eight opponents were too many. He was flat on his back, and they were kicking him. His own blood was in his mouth. What might happen when he blacked out was anybody's guess. Once, before medical knowledge had advanced to where it was, it would have been murder for sure.

Somebody intervened—a big guy in a gray business suit who had come striding along the block with an eager attention.

He didn't say anything at first. He just collared the toughs, two at a time in swift succession, and thrust them away.

Eddie staggered up and faced his benefactor, intent on giving him sincere thanks. "Mister . . . I . . ."

"Hello, Eddie!" the man said, chuckling. "I see you turned out hardy. Seventeen you'd be now."

Young Ed Dukas heard the voice and looked at the face. He stiffened. Then he made a statement in a flat tone that sounded very formal and unemotional, which it was not: "Sir, you're my father."

The man nodded. "Just off the assembly line, pal. The same guy—because you and your mother, and some other people, remembered what I was like. There was no record of me or of my mind. So, okay, they made one, fella. From the memories of me left in other minds. Thanks, Eddie."

"Thanks?" Ed Dukas said in a choked voice.

Bloody and dirty, he stepped forward. Father and son clung to each other. It was a moment of great triumph.

Ed's mind pictured filaments, as fragile at first as pink spiderweb but already outlining a human shape, held suspended in a kind of jelly—growing there, forming according to a record. Now even the record could be synthesized. It seemed like real freedom from death at last.

Ash Parker had not fled. Now he spoke, sounding awed, "Jeez, Mr. Dukas. I didn't believe it. Maybe my folks can come back, too."

"Your parents *will* come back," Jack Dukas affirmed. "I am the first 'memory man' to be resurrected. Among those killed who had had their bodies and minds recorded as was recommended, about a hundred thousand are alive again, as I think you know. Millions more are in process. One way or another, by record or by the memories of others, in flesh of the old kind or the new, almost everyone will return."

Ed felt his father's hand. As far as he could tell, it *was* of flesh. Yet it could be something else; Ed nearly trembled with excitement as his eager wonder and primitive dread of the strange battled inside him. He thought again of Mitchell Prell's first samples of vitaplast.

"Of which flesh are you, Dad?" Ed asked anxiously.

His father studied him there in the twilight of the day, while the silvery ring of lunar wreckage brightened in the sky.

"The old kind, Eddie," he answered.

"I'm glad," Ed said, feeling greatly relieved, a reaction which he knew was odd for one who loved the thought of coming miracles.

Jack Dukas sighed as if he had escaped a terrible fate. "So am I glad, pal," he said. "I guess I was favored by family connections." Here he paused, but his wink meant Uncle Mitch. "However," he continued, "the old flesh takes so much longer. That's why in many cases it won't be used. There must be thousands of androids already among us, living like everybody else. Since personal concerns are involved, statistics are kept rather confidential. These synthetic

people have organs the same as we have. And you can't recognize them just by looking. Only they're thirty per cent heavier, stronger, and they don't tire. There was a thought, once, that robots would make human beings obsolete and replace them. Sorry, Eddie. Why be gruesome at a time like this? Let's patch you up and then find your mother."

Young Ed Dukas was happier than he had ever been before. For quite a while he found peace. Maybe that was true of most of humanity now—for the past three or four years at least. There was no sharp delineation of an interval before the smokes of doubt began to come back.

Les Payten was still around. And Barbara Day continued to live at the Youth Center on the hill. Often the three would meet. Their childhood was behind them. Barbara Day's freckles had faded. Her dark hair had a coppery glint. A promise of beauty had begun to blossom. And her talk expressed many whimsical thoughts.

"We all know each other, Eddie," she once said. "So don't be offended. I sometimes think that you wonder whether your father is really the same person that he was—whether he ever could be more than a careful duplicate."

Les Payten frowned. "You're speaking to me, too, Babs," he pointed out. "I also have a 'memory father.' He's good to me, and mostly I like him. But sometimes I get scared, though I don't always know why."

Ed's skin tingled. "Could I be myself now and still be myself in another body, years later? Could there ever be two of me—truly—constructed exactly the same? I don't deny such a thing. I simply don't know."

But Ed Dukas continued to wonder about his father. There were several occasions when his dad was supposed to recognize certain people, casually encountered in the street. For they knew him.

Ed was present on one of these occasions. "Sorry, friend,"

Jack Dukas apologized to a burly, jovial man. "I guess they forgot to put a picture of you inside my head."

Les Payten's father was also subtly different from his original—though in a somewhat different way. The change was even very dimly apparent in his face. He had once been a big, easy-going, timid soul, nagged by his wife. Now his features bore a hint of brutality. He walked with a slight swagger. He did not roar, but the aura of power was there.

Ed's mother explained the change to his father: "Memory seems not always to match facts, Jack. Mrs. Payten fooled herself into believing that Ronald Payten used to be a bully. So she even fooled Schaeffer's mind-machines. And lol Ronald Payten *is* a bully now, as far as she is concerned. No, don't worry about her too much, Jack. She may even like being pushed around."

In the months that passed, from out on an asteroid came the step-by-step reports of the building of the first huge star ship. At home, one by one, old acquaintances—or was it just their reasonable facsimiles?—reappeared. Gradually most of the dead of the lunar blowup were restored to life—except for certain scientists who remained unforgiven.

But a new type of population was creeping into the fabric of human society. Its humanness, in an old sense, could be debated. Its first quiet intrusion was marked by an awe that faded into a shrug; it began to be accepted casually and somewhat dully, as most past novelties had been accepted before. Foresight could extend into tomorrow, but its pictures remained not quite real. The skills of cool, clear thinking, which education tried to impart in an era that needed it so much, fell short again. No doubt it should have been remembered that the shift from inattention to unreasonable panic can often be swift.

Even young Ed Dukas, though dedicated in his heart to New and Coming Things, sometimes lost sight of these deeper concerns because of his lighter interests. Without much

help from art, Barbara Day turned out to be beautiful. She had a pair of suitors automatically. Ed could have had his stocky frame lengthened. Les Payten could have had his big ears trimmed. But young men often frown on the vanity of tampering with one's appearance. Sometimes there is even a certain pride in minor ugliness.

They all had their dates, their dancing, their canoe rides—traditional pleasures, inherited from generations past. And they had the age-old problems of youth approaching adulthood. But now, for them and for their increasingly complex civilization, there was a new problem—vitaplast, which could be grown like flesh, though faster, impressed with a shape, personality and memories. It was said that 30 per cent of those who died in the explosion of the Moon lab were brought back in this firmer, cheaper medium. But its use did not stop here. For one thing, there were certain adventurous persons, alive and healthy, who changed the character of their bodies willfully.

One fact some might forget: there were other dead from years before, but remembered and still loved—parents, grandparents. Besides, there were historical characters—Washington, Lincoln, Edison, Cleopatra.

Possibly Joë Doakes could awaken from extinction, puzzled, wondering, frightened, but finding himself at least superficially the same, eating much the same food, enjoying much the same things. Then something super in his body would dawn on him, scaring him more or making him exultant. But it all seemed good at first glance, so a joyful world forgot its times of suspicion, even against the warnings of specialists, and released the new processes to almost any operator who could construct the needed equipment.

The solar system was big; the universe, optimistically promised, seemed endless. There was plenty of room. And the task of bringing back just those who had perished with the Moon was enormous and slow. So in cellars and out-of-the-way places countless biological technicians tried their

skill. They could not have made the grade at all if they were stupid, and their results, generally, were good.

The various Julius Caesars and Michelangelos really came into being as novelties, side-show pieces. All were reasonable likenesses, physically. From existing minds such traits and skills as each was supposed to possess could be copied more or less accurately. But none of the pseudo-great amounted to very much. They enjoyed a brief popularity; then, assuming the costumes and customs of a changed world, they sank into nonentity among the populace. Like most of those of the new flesh, they kept this secret as if by intuitive prudence. The many people restored in normal protoplasm were less reticent.

That there were androids around him, known, suspected and unrecognized as such, was a thrilling idea to Ed Dukas. It was part of the onward march to greater wonders—or so it seemed to him most of the time. Eager to understand how they thought and felt, he sought them out cautiously, not wishing to offend. Usually his efforts were met with coolness and evasion—which perhaps gave them away.

But then Ed met a very special memory man. He wasn't the copy of somebody famous. He was just a humorous legend. Yet now perhaps he was the right kind of personality striking against the right sort of circumstances to produce the type of action and fire that could affect the existing era.

Ed and his two friends, Les Payten and Barbara Day, found him in a little park feeding pigeons. Or, rather, *he* found them. For in conformity with an ancient village belief that no one should be a stranger to anyone else, he grinned at them and said, "Hello, there! Nice young fellers. Nice girl! Sit and gab a while? I keep gettin' lonesome. Mixed up. Got to get straightened out. Or try, anyway. Put yourselves down? That's fine!"

Abashed and curious after that, Ed and Barbara and Les sat and mostly just listened.

"Been around these times three months. Scared stiff at first. Thought I was addled. Know somethin'? I can remember all the way back to 1870. It's a fake, sure. No, they didn't make me look young, or even give me all my teeth. Afraid of spoiling 'verisimilitude,' my great-great-great-something-grandson-supposed-to-be said. I'm a family brag. Look what I keep carrying around with me. One of the first editions of *Huck Finn*. They found this tintype of a feller inside it. Illinois farmer. And look at this here writing in the front of the book. 'Property of Abel Freeman.' So I'm supposed to be him, slouch hat and all—funny, I can't get used to anything else. So I write just like that. This tintype and the writing are the only solid clues about what the original Abel Freeman was really like. Up to there, I'm him. The rest is mostly storybook stuff, and the idea the family has that their ancestor was a kind of pixilated hellion—the sort some folks like to tell about. Some way for a man to be born, huh? Shucks, I can even remember the night I was supposed to have died. Drunk, and kicked in the belly by my own mule, because he didn't like my smell. Hell, I bet in real life that mule would of plum enjoyed whisky!"

Abel Freeman stopped talking. He turned pale gray eyes set in a face that looked like brown leather toward his audience with expectant amusement, as if he understood the eerie impression he'd made on them and was curious about their reactions.

Barbara took the lead. "We're surely glad to know you, Mr. Freeman," she said, shaking his big brown paw and unconsciously aping his manner of speech. "I'm sure you could tell us plum more. What's the world ever coming to?"

His grip, for an instant, was almost literally like that of a vise. But when Barbara winced with pain, his hand relaxed, and his look became honestly gentle and apologetic, though it retained a certain slyness of tricks being played or unprecedented power being demonstrated.

"Oh, excuse me, lady!" he drawled. "This first Abel Free-

man—he was supposed to be a very strong and vigorous man. Me—naturally I'm even a lot stronger. Sometimes I just forget. But I try to be right courtly. There, I'll rub your fingers. Hope I didn't break no bones."

Barbara laughed a bit nervously. "No, Mr. Freeman—I'm fine," she assured him, nodding her dark head. "Now, if you'll tell us—"

"Oh, yes—about what the world and everything is coming to," Abel Freeman went on, his tone more languid than his eyes. "Well, matters could get mighty rough. I've been studying up—thinking. When I first got to these times, I didn't like them. Everything seemed addled. Guess I was homesick. I kind of resented being made the cheap way, too. But even way back in the years I remember, they used to say that maybe there'd be flying machines or even balloons to the Moon. So I perked up and got acclimated, and said to myself, 'Abel, my boy, take what's given to you and don't whine, even though you weren't asked if you wanted to come here. And with all that can be done now, why not bring your old woman and her chewing tobacco? And your four ornery sons? Nat was the worst. And Nancy, your daughter, who was an unholy terror? Of course this family that you recollect so good probably don't match historical fact so much, being just romanticized, mostly made-up memories put into your head. But they're plum real to you. Guess when they synthesized you, they should have left those recollections out. Because you love that family of yours, ornery or not, and would be happy to see its members again.' And I said to myself besides, 'Abel, bein' made the cheap way has got plenty of advantages. You're strong as a dozen regular men, and you won't need rejuvenation, because you'll never get any older. You'll heal even if you're hurt something terrible. Trouble is, your kind'll be some mighty stiff competition for the present holders of the land. Of course people want to get along peaceably—even your sort, Abel. But plenty of folks will wind up trusting your sort no more than they'd trust

a billygoat under a line of wash. Yep, I'm afraid there's gonna be some mighty interesting days coming!"

Abel Freeman ended his conversation almost dreamily. He'd hung his slouch hat on the corner of the bench back. In his iron-gray hair, the sun picked out reddish glints. His gaze, which might have been designed especially for precision squirrel-shooting, wandered down a path that curved along the park lake.

Ed Dukas found him a fascinating mixture of old romance and comedy, artfully concealing the most recent of wonders, the dark channels of which held the potentials of great centuries to come, or mindless silence after destruction. The treachery was not in Abel Freeman himself but in the fact of his being.

Ed's mouth was dry. "You're honest, Mr. Freeman," he said.

Abel Freeman answered this with a nod and a shrug. "Funny," he drawled. "Thought I saw a young feller I was sort of expecting. A congenial enemy, name of Tom Granger. Look, suppose you three sidekicks of mine get on your feet nice and easy, and walk the other way on that path. It would be safer. Not too far. Just a piece."

This might have been an armed robber's command, but Ed sensed that it was nothing like that. Without a word, he led Les and Barbara away.

There was a blinding, blue-white flash. The bench on which they had been sitting was gone—vaporized by fearful heat. Incandescent vapors rose from a big hole in the turf. When condensed and solidified, they would show little flecks of gold transmuted from soil. These were the effects of the familiar Midas Touch pistol. It used lighter atoms to form heavier ones, while it converted a little of the total mass into energy.

Freeman must have leaped away at just the right instant to avoid destruction. With astonishing agility, he was pursuing his intended murderer. As Freeman sprang to the youth's

shoulders, they both fell in a heap on the walk and slid to a stop. Freeman's hand flicked, and the weapon flew into the bushes.

By then Ed and Barbara and Les were standing over the prone forms. Freeman was unruffled.

"Friends," he said, laughing, "meet up with a young one with a sharp viewpoint and lots of guts in his own way. Yep, Tom Granger.

Granger was panting heavily. His mass of black hair streamed down over his thin face. He looked scarcely older than Ed or Les, but these days that meant little. In repose, his large, dark eyes might have been limpid and idealistic; now they flashed fury. His shabbiness was affected. Certainly, in this era, there were no reasons for poverty.

Now he began to struggle again, in Freeman's grasp. Futilely, of course. "Yes, I have guts!" he declared. "I wanted to kill you, Freeman—with whatever means that are left that can still accomplish that with things like you! I wanted the incident to get into the newscast—yes, to give me public attention. And not for any stupid vanity, but for the best purpose there ever was. I wanted a chance to be listened to, while I tell what everyone must have begun to sense by now. Damn you, Freeman! Let me up!"

Abel Freeman smirked indulgently and obliged.

Granger rose lamely but gamely. "You seem to be impromptu acquaintances of this Abel Freeman," he said to Ed and his companions. "He has feelings, he thinks; he's even a good person. In some ways he's just an interesting rogue of the nineteenth century. But he's a device. And unless something is done, we'll be as obsolete as the dinosaur! Our science serves us no longer. It serves other masters, nearer to its meaning. Others than I have realized it. In every two houses this side of the world there is already an average of one of these creatures of vitaplasm. Is Earth to be kept for us, and for the joy of being human; or are we to become—basically, and no matter how humanized—mere syn-

thetic mechanisms, trading our birthright for a few mechanical advantages?"

The shot from the Midas Touch pistol was drawing a crowd. An approaching police siren wailed.

Suddenly Granger fixed his eyes on Ed in surprise and recognition. "Dukas," he said. "Let me see—Edward Dukas. At a time when the world was more reasonably watchful, your house was under surveillance. As a possible means of contacting one Mitchell Prell—who had his hand in what once happened to us, and perhaps in what is happening now. How does it feel, Dukas, to be so close to such a celebrity? Ah, maybe you're shy!"

Flattening out Granger again would have been no useful answer to Ed's memories of bitter wrongs. He smiled briefly at him.

"Come see me some evening when you don't feel so much like making a monkey of someone, because someone has just made a monkey out of you," he said.

Then he hustled his companions away. "There's no good in getting involved in public confusion," he told them. "Anyhow not till we talk things out and get them straight."

Ten minutes later they were in a quiet restaurant.

"Abel Freeman," Les Payten said. "He was quite a surprise at that."

"Rather, more of a pointing out of facts we already knew," Barbara remarked.

"The old robot-peril come true," Less said pensively. "Humanity threatened to be replaced, not by clanking giants of metal, simple and melodramatic, but by beings much more refined—though they are perhaps much the same thing. My own father is one of them."

"There's truth in what Granger said," Ed pointed out. "There's that dread of being shouldered out of the way by something strange and tougher. I can feel it too. Granger can certainly make use of it, preaching. He's clever. But he's the worst kind of fool."

"Yeah, hammering on the detonator cap of the entire Earth," Less said, breathing softly.

The three friends, sitting around a table under soft lights and in pleasant surroundings, looked at one another. The food before them was good, the music was quiet and soothing. But at eye level, in the air where their glances passed, seemed to hang all the elements of the complex civilization to which they belonged: its luxury and beauty, its climbing technology that could conquer death and reach for other solar systems, but the by the same or related forces could dissolve worlds, especially if mankind, at the top, lost control of itself.

"I thought things would go along smoothly and reasonably," Barbara offered. "There's certainly plenty of room for both people and androids. I took all of that more or less on faith. But I'm afraid I'm wrong. After all, how can human beings live beside beings that blend indistinguishably with the mass and yet are stronger, quicker?"

Ed remembered signs of friction that he'd heard about. A minor riot here or there. He remembered public statements by specialists like Schaeffer admitting that some confusion was on the way but declaring that in the end everything should be better for everyone. Those specialists had the calculators, the great electronic thought-machines, digesting trends, making profound predictions. But then there was another thought—had many of those scientists already converted their own bodies to a stronger medium?

Ed saw that Les Payten had a faint sweat of strain on his forehead, though he knew that Les was no nervous coward. His sullen poise just after the lunar explosion long ago had proved that.

"Maybe the worst of all," Les was saying, "is the sense of being carried along, swiftly and helplessly, by things that are too big and complicated. You wish you could find a ledge somewhere in the time-stream and stop for a while to get your bearings. Sometimes you feel that you are in a one-

way tunnel where you have to keep moving. Is there light at the end of the tunnel? Maybe it's just a matter of personal adjustment—a taking of whatever comes.”

“I feel as though we’re at the threshold of some terrible danger, Ed,” Barbara said. “What can we do about it?”

He saw how strong and earnest she looked, and it reassured him. He touched her hand briefly. “I don’t know exactly,” he said. “But I’m for holding course toward the bigger future that stirred me up with big dreams of the planets, of the stars. And I’m in favor of being *reasonable*. I’ve seen too much hate and fear and unreason in people. The way things are, it doesn’t have to be a lot of people any more—just a few gone a little crazy. The Moon blew up by accident. A world was gone. But what happened by accident can certainly happen by design or with the aid of fury. So, everywhere we go we can talk against fury and panic, and *for* reason. To our friends, and in the streets. Everywhere that we can, and to everyone. Small as that effort is, it might help.”

Solemnly the three friends shook hands and agreed to work out the details of a plan.

III

THAT same night, at his home in the suburbs, Ed Dukas read an article that had especially attracted his attention. Could vitaplasma be grown into forms unknown before? Could it be shaped from a plan—a blueprint—like the metal and plastic forming a machine? Heart here, lungs there, nervous system arranged so? Scaly armor, long, creeping body? Or wings that fluttered through the air? The author saw no reason why this could not happen. Monstrous things. Ed Dukas chuckled at the melodramatic idea. But he suspected that it was far from impossible.

Young Dukas also had a caller that night.

“You said I should come to see you,” Tom Granger told

him when they were alone in Ed's room. Ed was on guard at once.

His visitor's mood seemed to have changed since the afternoon.

"Sorry if I seemed out of line today," Granger said. "My motives are good. And I didn't want to insult you."

"Thanks," Ed responded shortly. "But you didn't come here just to tell me that. How does it happen that you're not in jail?"

"Abel Freeman discreetly pressed no charges. I wish he had. But, like you, he just disappeared. There was only that hole in the ground—made by the Midas Touch pistol—a feeble thing to admit for a publicity showdown. So I kept still, and the police couldn't hold me. Fact is, most of them seem sympathetic to what I stand for—the venerable human privilege of walking on one's own green planet as a natural animal, loving one's wife and children in the ancient, simple manner."

Granger was a good orator. Mysteriously, Ed was faintly moved. Perhaps the gentle argument was too plain and clear. But Ed remained wary of the traps of language and feeling, and of perhaps impractical dreams.

His anger sharpened. Then, knowing the possibly deadly quality of anger in these times and wishing to counteract that everywhere, he yearned desperately to be a master psychologist, always calm and smiling and supremely persuasive. But he could not be like that. He was too human and limited. Maybe too primitive.

"You still haven't told me why you came here, Granger," he said coldly. "Why have you passed up a chance for public shouting to come and talk to me?"

Granger smiled. "You're clever enough, Dukas, to know that to win the nephew of Mitchell Prell over to my way of thinking could be to my advantage before that public. Or that, if I can't make friends with him, at least knowing him better might help. Even the latter circumstance could

be like having a finger on a whole set of advantages when the showdown between human beings and androids finally comes. Oh, I admire Prell! A great man—if he *was* a man when last seen! But his kind of greatness is poison, Dukas—though millions with short memories have foolishly forgiven him. But if he ever turns up again, you'll know it, and so, perhaps, will I—before he can do any further damage. You surely must realize that he bears a double guilt: for the blowup and for the development of vitaplasml!”

Granger's smile was savage and hopeful.

Ed laughed in his face. “You think that secretly I might hate Mitchell Prell, eh, Granger? But he was the idol of my childhood, a whimsical, friendly little man. So I'm stuck with loyalty. But even if I hated him blackly, I wouldn't come over to your side. I don't like the way you think. Until the blowup happened, it was bravo for science and empire. Afterward, your hysterical soul was free from blame and white as snow, and he was guilty. Maybe I judge you wrongly. I hope I do. But the way I add it up, it's not the androids or any other new and inevitable development that is the big danger; it's people like you, though maybe you don't realize it. Loudmouths who stir up confusion, animosity, hatred. Maybe I ought to kill you. Then there'd be one less spark in the powder barrel!”

“Why don't you?” Granger mocked. “There'd still be others. And I'd be brought back.”

Ed nodded. “The benefits of our civilization,” he said. “How would you like to be an android? Does the idea scare you? You know, Granger, some people say that, regardless of how you're returned to the living, you're not the same person you were but only a superficially exact duplicate.”

“You know I'd always choose to be human, Dukas,” Granger muttered, looking almost terrified.

“Sure, Granger,” Ed taunted. “You're not afraid of death—the knowledge that science can restore you gives you cour-

age. You can take the benefits of scientific advancement, can't you? But assuming its responsibilities is another thing."

"I'm not dodging responsibility! I'm grabbing it, Dukas! I'm striking out for sane control. I've done things already! While I worked in the vaults, where personal recordings are kept, certain of those little cylinders disappeared. They won't be found again! Some men don't deserve that much protection against mishap—among them your uncle! I'm proud of this, and I boast of it! No, don't accuse me! Even an official complaint would be challenged by many people and then buried in a heap of red tape. I can be a dirty fighter, Dukas; and I'll bite and kill and kick and holler my lungs out to keep this planet from going to the machines!"

The wild look in Granger's face was the thing that prompted Ed to action. The admission of the theft only emphasized the ghoulish determination that was there. The only hope seemed in smashing that ego out of existence—for a while at least.

Ed chuckled. "So you'd take even the essence of people's selves," he said.

Granger's gaze didn't waver. "If every last thing I hold dear—and which I believe most real human beings hold dear in like manner—were in danger, I'd do anything."

"So would I," Ed said grimly.

Then he struck and struck and struck again. Blood spurted from Granger's smashed lips and nose, as he crashed to the floor, struggled to his feet and fell again.

There was movement at the door of the room. From behind, Ed was gripped by a strength greater than his own. "Stop it, Ed," he was commanded quietly. It was his father.

Through bloodied lips, Granger was explaining hurriedly, "Your son and I disagree. He lost his temper. All I ask is that the good parts of science—medical and so forth—be kept and the rest banned. And that life become simple. A thing of fields and flowers, and wholesome physical work. And not a mechanized bedlam, full of constant danger and tension."

Granger sounded very earnest, Ed thought. Maybe he was earnest. Maybe he was a good actor.

"Ban this, ban that!" Ed shouted. "No one ever lived happily under the kind of artificial bans you mean, Granger! And what will you do with the billions of people who disagree with your pretty vision? Some of them will hate what you advocate as much as you hate existing circumstances! And if modern weapons are once used . . ."

"Quiet, Ed," his father said softly. "You've assaulted your guest—one who, as far as I can see, has the most reasonable of views. A beautiful picture. I agree with it myself—entirely."

"Look, Dad," Ed began. "This Granger here is trying to solve today's and tomorrow's problems with yesterday's poor answers."

Ed stopped. He had an odd thought: his synthetic father had been created largely from his and his mother's memories, at a terrible time of grief, when his mother's reactions had turned against the groping toward the stars. Before that, Dad had been somewhat averse to mechanization. But now he was distinctly more so, as if that grief and aversion had marked him.

Jack Dukas was now medicating Granger's face with antiseptics while Granger preached, as if from some deep font of a new wisdom: "You see, Mr. Dukas, again, as in the past, danger is creeping up on us without receiving serious attention. Beings that are really robots are already controlling part of their own production. Their creation, everywhere, should be banned or stamped out. Existing androids should be converted to flesh or destroyed. . . . I'll go now. Thank you for your help. But I think I'll get in touch with your son occasionally. He needs guidance."

Ed nodded grimly. "Perhaps I do," he said. "Maybe everyone does. You watch me and I'll watch you, eh?"

During the succeeding months Ed did his best to spread his doctrine of calm and reason, working against the agita-

tion which he knew was already well under way. Les Payten and Barbara Day were with him in this. All over the world there were others, mostly unknown to them, but with the same ideas: "Use your head. . . . Don't put fear before knowledge. . . . Do you *know* an android? What is his name? Maybe Miller or Johnson? You must know a few. And do they think so differently from yourself? Yes, there are problems and no doubt prejudice. It may even be justified. But the answers to our difficulties must be cool-minded. Everyone knows why."

Ed and his companions talked in this manner to their acquaintances, spoke on street corners, sent letters to newscast agencies. And they won many people over. The trouble was that they, and others like them, could not reach everybody.

Their Earth remained beautiful. There were hazy hills covered with trees; there were soaring spires. The unrest was an undercurrent.

This was a time of choosing of sides, and of buildup, while there was a sense of helpless slipping onward toward what few could truly want. Voices with another, harsher message were raised. Tom Granger was hardly alone there, either. Tracts were passed out as part of their method: *What Is Our Heritage?*; *The Right to Be Human*; *Technology Versus Wisdom*. Perhaps directly out of such a mixture of truth and crude thinking the assassinations began. There were thousands in scattered places.

One day Ed Dukas pushed into a knot of curious onlookers and saw the body of one of the first of these. There, in the same park where Ed had first met Abel Freeman, it had been found in the early morning. A Midas Touch blast had torn it in half.

"It's Howard Besser, a machinist who lives in the same building with me," a man in the crowd offered. "He died once in the lunar explosion. Now it happened again. That's no joke, even though he can be brought back."

Ed saw the victim's torn flesh. It *looked* like flesh. But

broken bones had little metallic glints in them. Could you avoid remembering that, mated to like, these beings of vitaplasm could even reproduce their kind, to help increase their number? Had persons like Tom Granger planned even this dramatization of a difference? Bits of this flesh still squirmed, hours after violence.

Granger had made progress. Growing public attention had won him the privilege of orating on the newscast. It was he who had first talked about vampires and androids—together, and to a world-wide audience. He also accomplished an important part in winning the legal suppression of labs creating human forms in vitaplasm.

"It was desecration," he declared in his speech. "It is a tragedy that we could not clamp down the lid sooner. There are an estimated seventy million of these 'improvements on nature' now in existence. And there are many hidden establishments still producing more. Can we ever destroy them all? It is criminal to lock a human soul in such substance. If, of course, the soul truly remains human, as it was meant to be . . ."

Granger's voice was always gentle. Yet to his listeners it suggested dark, lonesome places where there is danger. Which was true. For now other killings had started. Familiar human blood was spilled.

On a pavement Ed saw a grim legend smeared in red beside a corpse: "WHO WILL INHERIT THE UNIVERSE? RETRIBUTION. ONE GOOD TURN DESERVES ANOTHER."

Scattered throughout the Americas, Europe and the Westernized Orient were millions more of such murders. The result was a trading of grim goods, with the far harder android winning in the tally. And that winning was a threat. It could seem a promise to man of the end of his era. So here was another spur to hysteria, always mounting higher.

Ed Dukas and his friends stayed on at the University. They studied with the efficient help of the sensipsych machine and its vividly real visions, which could demonstrate as real ex-

periences almost any skill, from the playing of an antique Viennese zither to the probing of the inner structure of a star. They also put in scattered hours of work in the factories, whose products still aimed at empire in the spatial distance. But above all they kept on with their appeals for reason. Their success was great. In the main, people were reasonable and clearheaded. But a total winning-over was far from possible.

Noted men such as Schaeffer were shouting on the newscast. Shouting for calm—increasing the tinny babble of the choosing of sides.

More and more, Ed Dukas began to lose faith in the Big Future.

"Maybe we should have kept still," he said to Les Payten and Barbara Day. "We only added our small faggot to the fire."

His friends laughed with him—ruefully—as they walked together across the campus.

Some minutes later Les Payten nodded to them, and, with a half smile, said, "So long for now. Don't lose any sleep—not over worries, anyhow."

He sauntered off. In matters of love, Les was a good loser.

Barbara Day had taken a little apartment on a tree-lined street. It was nice to walk there in the twilight. Not far from the apartment a half-acre of ground had been allowed to grow wild with trees and bushes, for contrast to the surrounding sleek neatness.

There, in the thick shadows, Ed Dukas saw sinuous movement. He had a fleeting glimpse of something long and winding, and perhaps half as thick as his body. Then he saw it again—saw its weird glow, saw the interlocking hexagonal plates that covered it everywhere. But it did not suggest a gigantic snake at all. For one thing, its mode of locomotion was different—a rippling movement of thousands of little prongs on its undersides seemed to be involved in its prin-

ciple. It hurried quietly now for cover. Rhododendron bushes parted. It disappeared behind a great oak.

Barbara and Ed rushed forward. The grass bore no marks. Prudently, they did not venture into the dark undergrowth.

Ed's skin prickled all over and felt too small for him. "This is it," he said in a flat tone.

"What, Ed?"

"Life plotted on the engineer's drawing board. Vitaplastism. The days when nature designed all animals are over, I'm afraid."

"What would it be for, Ed?"

"How would I really know? Want to guess?"

"To create more terror maybe?" Barbara said. "What else? To go around at night—to stir people up with a horror that they've never known before. They'll realize it's vitaplastism, the stuff of the androids too. They'll link hatreds. Maybe it's another trick—a propaganda stunt to force the fight to the finish. A stunt invented by somebody like Granger."

"It seems to fit the pattern," Ed said hoarsely. "You're probably right. But this thing could have been made by the other side, too. The android side. As a means of reprisal. I've admired them. But I don't especially trust *their* judgment, either."

Ed Dukas felt sick. He wondered now how much longer anything on Earth could last.

Barbara touched his arm gently. "Ed, we should notify the police. For the safety of the neighborhood."

"Of course. And you won't stay out here alone tonight. You'll put up at a hotel, or I'll bunk on your floor."

Barbara managed to laughed. "The building is stout. My window is high. There are plenty of tenants. I'm not dangerously stupid and I don't swoon. But I rather like the idea of having you close by."

Ed Dukas had no trouble convincing the police that he

had seen something extraordinary—which was proof enough that there had been other calls, previously. Ed slept a few hours on a divan, listening, while, outside, armed men patrolled the streets and watched the backs of buildings, which were kept brilliantly illuminated. Floodlights lighted up that shaggy wood lot like day. Low, flat robot vehicles plowed through it.

Nothing was found.

But miles away, nearer the city, there were a dozen dead—all of them of the old order of life. They were crushed. Not a bone in their bodies was intact. They had been dragged from their beds while they slept.

Horror swept through the city. The monster or monsters had been seen. They were of the same substance as the androids. Therefore, this was an android attack, clear and simple—to minds blurred by fear and fury.

Scared, angry faces surrounded Ed Dukas in the streets the next morning. The coldness in him was like a stone behind his heart. He seemed to be hurled along by time, helpless to change its course. Even Barbara looked sullen and confused, though, walking beside him, she tried to sound cheerfully rational.

"You know, we could all be changed over into androids. I wonder if you or I would ever want that? I think that even you are not especially sympathetic to them, except as something new and potentially great. Damn! I wish my wits were clearer. An android is a refined machine, you might say. But to be a human being is to be a thing of soul—is that it? A creature of tradition and pride, of sentiment."

Ed Dukas shrugged. He felt bone and brain weary.

That same day there were bloody riots in scattered localities—much worse trouble than before. It seemed like the start of an avalanche.

That afternoon another incident happened. Les Payten came to meet his friends again in their favorite restaurant. They sat chatting glumly and listening to the newscast.

The androids—"The Phonies," they were already being called—were slipping away to the hills, for safety and also no doubt to gather their own not inconsiderable numbers, and to entrench themselves.

Les Payten was called to the phone. He came back after a minute, saying with a puzzled expression, and almost a cynical smile, "My father committed suicide. He left a note: 'Eternity is a joke. And I'm sick of being a robot. But what's the good of being a man, either—now?' Burned himself wide open with a Midas Touch pistol. I guess the ultimate cruelty would be to bring him back."

That night there were three times as many crushed bodies as the night before. But there were far more deaths caused by other violent means. Two weeks passed, each day worse than the preceding. Neighbors started hurling imprecations at neighbors: "Test-tube monkey! . . . Obsolete imbecile! . . ."

Once there was a news report: "Equipment found—a power generator of a type and output similar to that for a star ship, but obviously for another purpose: meant, it seems, to power high-energy weapons of the beam type. Is this an android or a human assembly? The equipment was ordered dismantled. It was found in a large basement in the City."

And Tom Granger began his broadcasts again: "Androids—your numbers are relatively few. You could not win against us. And we would take you back—kindly—to become people again. Most of you once were human beings. You were meant to be that. . . ." Granger's tone was softer; it was condescending.

Ed Dukas phoned Granger at the newscast studio. After a long wait, he managed to contact him. That Granger agreed to speak to him at all was no doubt due to Ed's relationship to Mitchell Prell.

"Granger," he said, "I'm pleading. Please, forget that you know how to say anything. No, I don't want to offend you—

but it's just no good. I'm not guessing—I've seen. To some you may be a great leader. To others—well—you're a lot less. So do us a favor—again, please! Go away, disappear. Take a long, silent rest in a place unknown."

Ed Dukas was desperate, grasping at straws. For a fleeting moment his hope almost convinced him that his mixture of begging and ridicule might work.

"Do I know you? Oh, yes, Dukas!" Granger mocked. "We should converse again when we both have the time. You still need instruction, I see. You are an incorrigible lover of fantastic novelty, Edward Dukas! Now you're frightened."

"Yes, I am frightened!" Ed replied, calmly now. "If you weren't a fool and a fanatic, you could guess that millions of androids—supermen, some call them—could not be weak."

"Goodbye for the present, Dukas." Granger broke the connection.

Ed rubbed his face with his hands. He thought of the sinuous thing he had once seen, and of the killing that it—and other things not necessarily of the same shape but of the same substance—had done. Could Granger be one of those who sought to stir up more dread and fury with lab-created monsters of vitaplasma? Should he try first to find out who was using and directing them?

It would be slow work. So, that same afternoon, he chose another path which might lead to quicker results. He went looking for old Abel Freeman, who he guessed was of the sort to be a leader among his kind. By asking around, he located the house where Freeman was said to live. But the picturesque android had long since vacated his lodgings.

Ed gathered Les Payten and Barbara.

"Freeman will be in the hills somewhere," Barbara pointed out. "With others like him. What if, for a lark, we rent a helicopter, and see if we can find him? What can we lose?"

"We're near the end of our rope," Les said. "I'm willing to try anything."

It was a crazy stunt, but they agreed on it. Ed had picked

up some information about where Freeman might be found, plus a few facts of his recent history. Naturally, Freeman had a bad reputation.

Arriving over the wooded mountain country where Freeman had often been seen in the past, Ed let his craft settle into various forest glades, one after another. At first they saw no one, although certainly many androids had now retreated into this wilderness.

However, after they had made a dozen tries in as many places, Freeman himself suddenly appeared, dirty, covered with burrs, but dressed now in coveralls of modern vintage. A Midas Touch pistol was in his belt.

"Hello!" he greeted. "Yes, I know you three young ones! Are you lost?"

"We're here for neighborly conversation," Ed began.

"That's mighty nice," Freeman mocked with a twinkle in his hard blue eyes. "Could be you're here just to snoop. Could be me and the boys should do you in."

"Could be we *are* here to snoop—to learn a little better what's going on, that is," Ed replied. "And we're also here in the hope of finding somebody with good sense and wits and influence enough to keep this planet from becoming another Asteroid Belt."

Abel Freeman's glance held a certain sparkle of admiration when he glanced at Ed; then it turned grim.

"You couldn't mean me," he said. "Figured on going around, minding my own business, without being crowded. Got crowded plenty, though, closer to the City. Gettin' crowded here, too. Had to smash up quite a few people. Don't figure on taking it for good. Lucky we were made cheap. Couldn't stand it, otherwise. Hiding in the brush. Eating sticks. Hardly ever sleeping. Lucky we can't catch pneumonia. We could stand conditions far worse than this—but it gets awful tiresome. Seen Granger lately?"

"You can smell him most everywhere," Ed answered bitterly.

There was a loud explosion a hundred yards to the left. A Midas Touch blast. Ed felt the shock-pressure of it and held his breath until the radiation-tainted vapors cooled and blew away.

"That's Nat, the hellcat of my boys," Abel Freeman remarked casually. Then he shouted, "Nat—you damnfool—don't you know there's company?"

Then Ed and his companions saw them—a beetle-browed foursome peering from the brush. The Freeman boys. They looked like a quartet of Neanderthals. But in a way they were less human than Neanderthal men. For they were the crystallization, via science and vitaplasm, of someone's romanticized and comic conception of the vigor of his ancestors.

Behind them now appeared a girl with pale golden skin and eyes whose slant suggested the beauty of a leopard. This would be Freeman's daughter, the inestimable Nancy. There was also a leathery crone, mother of the pack, and wife of Abel.

Nat Freeman fired the Midas Touch again. Obviously he wasn't trying for accuracy. In fact, he must have miscalculated some. For the wind blew the radioactive vapors against Les Payten, standing a little to one side. He screamed once, writhing in their hot clutch, and collapsed.

Abel Freeman, the android renegade, rushed unharmed through those vapors. Only his clothes charred. "Nat, you stop playin'!" he ordered. "And as for you three young ones—you haven't got the sense you talk about! Coming here? You're enemies. And you're weak as daisies! No, I don't figure I'd ever want to be your kind, even without the raw deal I got! Lots better to be a devil in the woods until we can come out—if there's anything left to come out of, or to! Now get out of here fast—before my family gets annoyed."

Abel Freeman lifted Les Payten's hideously burned body into the helicopter and then held the door open for Ed and

Barbara. "You better take care of this fellow right away," Freeman said. "Now get on your way!"

Ed guided the craft toward the City, where Les would certainly spend several weeks in a lab tank before his injured flesh was back to normal. Les kept muttering in semi-delirium, "Damned robots. Freeman, too. And damned, ornery people. Got to pick between them, don't we? So maybe zero will cancel zero. Can't stay on the fence all the time. Sorry, when the going gets rough, I'm for the people. Peaceful common sense? There just isn't any."

Les's voice sounded like a dirge for two races.

Barbara said, "Maybe he's right. There isn't any sense left. Only a picking of sides for battle. Our efforts went to waste."

She sounded remote, almost unfriendly. Ed suddenly felt that he was losing her, too.

IV

THAT was a bad evening for Ed Dukas. He left Barbara at her house, which was now guarded. But he did not get home easily. For that was the evening trouble became general. John Jones of old-time flesh and blood, and George Smith of vitaplasm forgot all their politeness and let their smoldering thoughts come to the surface:

"So now you brew up monsters like yourselves, to attack us. I wouldn't be like you if it was the last way to be alive."

"Oh, no, brother? Those creatures must be yours. What makes you so good? Born with your own hide, eh? The elite. With jelly for insides, and a mean nature."

Talk swiftly led to flying fists. But who could hurt an android with a human fist? Before their hardened knuckles a human jaw could become mush. Still, there were heavier primitive weapons. Then, by progression, weapons that were not so primitive.

Ed didn't try any more to quell the trouble. He watched

it, walked around it and away from it. The wise and careful thinking that he had been taught to believe in seemed to have deserted his kind. The stars were only a remote fancy, lost in the chaos of local emotion. Feeling beaten, Ed finally got home.

This was the evening when he told himself that anything could happen at any moment—that morning might not even come. On the newscast, he heard the report that the first star ship—to be aimed perhaps at Proxima Centauri or Sirius—was within weeks of completion out there on its asteroid. There were infinite heights to this era of his. And terrifying depths.

This was the evening when, fearing that the spoken word could no longer be heard through the din of clashing hatreds, Ed Dukas decided to write letters.

He meant to begin with a letter to Les and then write to his father, whose eyes had turned backward toward archaic simplicities. He wanted to write to Granger, asking again for calm. But he had only completed a few paragraphs to Les when that kid nickname of his appeared on a blank sheet of his paper. From nowhere:

"Nipper."

Only Mitchell Prell, unheard from for ten years, had ever called him that. His uncle. A likable little man, tainted by accusations, but part of the once thrilling thoughts of the future. Mitchell Prell had belonged to the onward surging and reaching of science—and its stumbling. The lunar blow-up had come as a forerunner of the first leap to the stars. And the human-and-android animosity had resulted from the mastery of the forces of life. Wonder becoming horror. White turning black. Till you hardly knew what to believe in, except that, being alive, you had to go on trying to make things right.

For an hour Ed Dukas sat in his room. Nothing more appeared on the paper which he had clamped under his microscope. *"Nipper."* That was all. Silly name of his childhood.

Often he looked around him, as though expecting someone to appear. Several times he said softly, "Uncle Mitch, you must be here, someplace. . . ."

There was no answer.

The muttering tumult in the streets—the shouts, the occasional rush of feet, the curses and yells—masked the arrival of Tom Granger. Ed was startled from his preoccupation to find Granger almost at his elbow. With him was a man who looked like a plain-clothes police official. In the background, grim and frightened, was Ed's mother.

"Eddie," she said. "If you know anything, tell. Mitch just isn't worth any more trouble to us."

"Tell what?" Ed demanded, rising.

"About where Mitchell Prell is," Granger told him. "You said things which hinted that he might be around."

Ed's throat tightened. It was still a minor shock to remember that the probe beam had probably been used on this house sporadically for years. The refined radar of the probe beam could, if minutely focused, make fair pictures of distant things inside walls. But Ed didn't think that it could make the small print on a sheet of letter paper readable. But there were instruments that could pick up faint sounds from miles away—a voice, for instance—and amplify them to audibility. Ed was still sure that, over distance, his mind itself remained inviolable.

Ed felt cornered by the brute forces that always take over whenever reason is broken down by fear. Once his uncle had been a scapegoat to blame for disaster. Then, poor memories and triumphant years had half forgiven him. But now, during trouble, he was guilty again. And according to savage concepts of justice so were his relatives.

The confusion of half blaming his uncle left Ed and was replaced by stubborn loyalty. He summoned all his self-control and grinned carefully. He wondered if the fright in Granger's large eyes reflected realization at last of the angry hands, gone completely untrustworthy, that now touched the

controls of modern science. Was he getting intelligent so late? Or was he afraid of something simpler?

Ed forced a laugh. "You picked up my muttering, Granger," he accused. "I wonder what *you* mutter about, these days? Grant me the same privilege of nervousness under strain which you could do a lot to relieve, everywhere, as I have been begging you to see. No, I don't know where Mitchell Prell is, though I wish I did."

The plain-clothes man had moved over to the table. Now he peered into the microscope. Soon he motioned to Granger to do likewise. Ed felt the roots of his hair puckering.

"What does '*Nipper*' signify to you, Dukas?" Granger asked at last, levelly.

"Suppose it's my pet name for you, Granger?" Ed answered. "Your friend can take the paper along. The police laboratories might make something else of it. Maybe I doodle with a bum pen and absent-mindedly stick the doodle under a microscope—and right away somebody wants to make a story of it. You want to psyche me? I've humored that kind of whim from the police before. This time, for cussedness, I'll stand on my rights and demand that they get a court order before they meddle with my most private possession, my memory. Especially since hotheads and hysterics seem to have taken over. But wait, Granger. I'm sure that sensible people are still in the majority. They haven't reacted very much, yet. But they will—with matters as bad as they are now. Maybe they haven't any answers to our problems, except calm and the hope of working something out. But that's a lot. We were schooled to cautious thinking, Granger, and that means something, even though you and plenty of others can lose their wits. Maybe the sensible people will finally shut you up!"

"We'll take the paper along all right," the plain-clothes man said. "And you, too. We already have the court order you mention."

"Dukas," Granger said with a show of great patience, "will

you ever realize? We're facing a soulless horror. We must be harsh if need be. But you should be glad to give your absolute co-operation. It's your duty. We have always felt that Prell is alive, somewhere. Twice he has been part of disaster, even if unintentionally. We must stop him before he can bring us greater, unknown dangers."

Ed eyed this thin, wily man who had managed to assume a certain unofficial power in the world. And again Ed had trouble judging him. Perhaps he was entirely insincere. Yet he had, too, the marks of the rabid crusader following obsolete themes that needed revision; following them blindly, with both a kind of courage and the crassest stupidity.

"Tell me something, Granger," Ed said. "I'm curious. And I know I have a duty, however different from what you mean. Did you have a hand in the creation of the monsters of vitaplasma? I mean the real monsters, not just the androids, the Phonies. The use of terror is old in war and politics. Stirring up fury, with the blame carefully implied elsewhere."

Granger's features stiffened, as if he had been insulted, or perhaps he was just acting. "I would not dirty my hands with things from hell, Dukas!" he snapped. "Unwise as you are, you must know that! Now I think the police want to take you away."

Ed's mother stood in the doorway of his room without saying a word. She looked strong, yet bitter and scared. He knew that her loyalty was with him, though her views differed somewhat from his.

His father must have been out of the house when Granger and the other man arrived, Ed thought. Did his going out on this chaotic evening mean anything special? Wanting to be loyal, and at least half sure that the wish was returned, Ed didn't care to complete the thought.

He was concerned about his mother, yet he said, "Try not to worry, Mom. Go to bed. They'll have to guard the house."

I can still insist on it. And I don't think I can be held very long, even now."

"Your father will come to you as soon as he knows, Eddie," she said.

So Edward Dukas was carted off to the local bastille. A helmet was put on his head. But what was learned from him about the whereabouts of Mitchell Prell must have been both confusing and disappointing. Certainly, though, it must have intrigued the police, as did that single name on the paper, which told them nothing under the most careful scrutiny.

Bronson, the portly local police chief, introduced Ed to a man named Carter Loman, a bullishly handsome character with a mouth like a trap, a smile to match, and a gimlet scrutiny. A big wheel of some sort, Ed assumed. Was there something familiar about him?

"You'll have to spend the night here, Dukas," Loman rumbled.

Ed put out the light in his cell, but as he crept into his cot, he held a bit of paper from his coat pocket in one hand. He left his fountain pen open, on top of his clothes. For maybe an hour he lay quietly in the dark, listening to the scattered noises of the troubled night. Then he slept.

He awoke as dawn grayed the east and glanced at once at the paper in his hand, which he had kept outside the blanket. Ed's heart leaped. A message had been written. Perhaps it had taken all night to toil it out at a creeping pace: "*Nipper—argue police—you go Port Smitty—Mars—at once.*"

The final *e* of *once* was already written, except that a line of it was still being extended. A little dot of wet ink was still laboring across the paper.

Ed had no microscope or pocket lens, but he risked turning on the light. He peered hard. He was not at all sure that he saw anything special. But imbedded in the dark liquid he thought for an instant that he beheld a suggestion

of form—impossible or entirely fantastic. Then the tiny minuscule of ink quivered, and the hint was gone.

Ed whispered, so low that he himself could not hear, "Uncle Mitch. I know that you're around—in some form. I wish I understood what you're up to."

Ed tore the message from the sheet of paper, chewed it to a pulp, and spat it on the floor. At least he was destroying concrete evidence that might provoke greater attention than his psychéd memories. Of course they would psych him again—that was why they had held him, hoping that he would learn more. But he had learned very little.

The psyching was done. Chief Bronson and Carter Loman knew all that he knew. Now Ed offered his proposition: "Suppose I got to Mars, as Mitchell Prell suggests? I seem to be the only man to contact him. You are aware that I myself haven't more than a wild glimmer of where the trail leads. But you know that I'm badly worried about what a human-and-android conflict can mean, and that I want to break the danger somehow. If you want to find Prell, track me by the best means that you know."

Chief Bronson nodded, musingly.

"Hmm-m—very good!" Carter Loman grunted. "Of course you would prefer to act alone, Dukas, because you are fond of Prell. You offer to combine forces with us only because it is the only way that you can do what you want to do at all. All right, we agree."

"Tickets and passport will be arranged for immediately," Bronson said. "And now there is someone here to see you."

It was Ed's father, angry with him but more angry with the restraint under which his son had been put.

"Damn it, Eddie, I tried to get to you last night, and they sent me away!" he stormed. "And what have you been up to? What's this nonsense about a message from Prell? Damn, has everything gone completely crazy? I was for this man Granger and his return to rustic simplicities; but he's

gone wild, too! Isn't there any way to handle what's happening? Phonies, and things from a witch's caldron, but grown to elephant size. And more of them all the time! Where does it stop? . . . Well, it helps a little that lots of people went out last night breaking up fights. Even some Phonies did that, they say; but should we believe it? Scientists were on the run everywhere, as maybe they should be for inventing so much new trouble. The Schaeffer lab is barricaded. I'm glad for your sensible people, Ed, but can they hold the peace for more than a little while? And would it do any final good if they could?"

Jack Dukas, the "memory man" of old-time flesh, was more like a dad to Ed again, and Ed was almost as glad for that as he was for the awakening of the forces of calm and order.

"Thanks, Dad," Ed said with a cryptic meaning of his own. "It's a small lessening of danger, anyway. It's a fact, though, that the situation, at the moment, is an explosive magazine which one well-placed idiot could set off. And it's hard to see how there could ever be less than many. Say that our population is split three ways. Android, human and that mixed group which is trying to keep them from each other's throats. It's hard to see how the latter can succeed for very long."

For a moment Ed and Jack Dukas were almost close, in spite of differences. Ed was a little reassured.

"I'm going out to Mars, Dad," he said. "With police cooperation. Maybe to find my uncle. And—who knows?—maybe even to find some useful answers."

Jack Dukas shrugged. "More science, no doubt," he said. "Well, anyway, good luck."

The brief spell of companionship was broken.

For a moment Ed was tense with the thought of precious time possibly wasted, chasing off to the Red Planet, when perhaps he should be trying to hunt down the perpetrators of offenses to a new biology—in vitaplasm. He knew that time remained still desperately short, with nuclear hell

building up. But a choice had been made, and he sensed that it was the best one.

Ed and Barbara went to see Les Payten that morning. He lay in a bed, his body encased in an armor of plastic, under which fluids circulated. He had mended enough to listen and speak. Ed partly explained his intentions. About them, Les showed a mixture of a sick man's insight and weariness: "I hope we'll see each other again, Ed. And that the world will still be around. And that you won't be changed too much—strong, weak, big or little. Because I've got things figured out *for me* at last, Ed. Granger is right, as far as I am concerned. I was a romantic kid, but now I've had enough! The stars are still farther out of reach than we realize. Got to fight the murdering Phonies and all of the vitaplasma menace, no matter what. Because there never was a menace like it—not to me." Les grinned wanly. "So long, pals."

In a park, some hours later, Barbara and Ed walked in the beautiful dusk, while the arch of silvery murk that had been Luna masked a few of the first stars. Something with long webbed wings was visible in silhouette against it for an instant—another creature that never existed before. It added a chill to their low mood. Ed was thinking that he must say goodbye to Barbara, too, very soon, and to all the chaotic wonder and charm that was Earth. Earth maybe in its last days.

Barbara said, "I wish I were going along, Eddie."

"So do I. Babs, go out to the asteroids. Like my mother. It's safer there."

"I *meant* my wish, Ed," Barbara protested earnestly. Of course, a girl is still sometimes rated as a nuisance that a man has to take extra pains to look after—no companion for one to concentrate on the dangers ahead. Maybe it's true."

He looked at her sharply and gulped hard. But gay little bells seemed to tinkle in his head. "Maybe a lot of things," he commented. "But I think you, as much as anybody, know what we're up against. Possible death, of course, which could

be permanent. Or some fantastic loss or change of identity. How can we guess just what? If you can take all that mystery and hardship, too—well, I won't say no. Maybe if you were Mrs. Ed Dukas we could have Bronson provide your tickets to Mars."

Her smile came out, like the sun. "You're heartlessly matter-of-fact and unromantic, Ed," she told him.

He drew her into the shadow of a tree. A couple of minutes later, when he released her, they both looked dazed—as though, crazy as life was, it still could be heaven. She was beautiful. He'd never seen anyone so beautiful.

Fifteen hours later they were aboard the *Moon Dust*.

V

As THE ship rose on its column of fire some of the old love of distance and enigma came back to Ed. There was also a sense of adventurous escape, like that of city workers of centuries ago, when, chucking business and office routines, they had rushed to the country on weekends to regain a little of primitive nature while they scorched a steak over a smoky fire in the woods.

On the *Moon Dust* there were more women and children than men: refugees from danger. But would old Mars be much safer? Didn't it now belong to the same human civilization, with its dark undercurrents?

The Dukases were smoothly hurled across the vast trajectory to Mars. They landed at a high south-temperate latitude, not far below the farthest extent limit of the polar cap; though now, in summer, it had dwindled to a mere cake of deep hoarfrost a few hundred miles across and on high ground. Around this remnant stretched a yellow plain made up of crusting mud, swiftly drying lakes scummed with the Martian equivalent of green algae, and white patches of ancient-sea salt and alkali.

But Port Smitty itself was in a wide, shallow valley, or "canal," a bit farther north. Its many airdomes, necessary to maintain an atmosphere dense enough and sufficiently oxygenated to sustain human life, loomed among vast greenhouses and thickets of tattered, dry-leaved plants. The central dome was topped by a statue of old Porter Smith, this region's first human inhabitant; he was still alive but long gone from the Mars he had loved. For he had associated himself with the building of star ships.

Port Smitty already boasted a population of half a million. And there were other cities of almost equal size. On Mars, many of the first rejuvenated had settled. And many colonists of every sort had come there since.

On the rusty bluff overlooking the city were the remains of a far older metropolis—towers, domes and strange nameless structures for which anything manlike could have no use. Fifty million years ago the Martians, like the people of the Asteroid Planet, had been wiped out in war.

Ed Dukas and his bride rode by tube train from the flame-blasted spaceport to the city. Their hotel room overlooked a courtyard lush with earthly palms and flowers. Birds twittered and flitted from branch to poppy bloom. From somewhere in the hotel came dance music.

Their room was supposed to be energy-shielded, but Ed remained cautious. He merely left his penpoint bared in his coat pocket, with the envelope of an old letter. He had already told Barbara all he knew about Uncle Mitch's message and had added some wild guesses. So now she gave her husband a smile of understanding as he hung his coat carefully on a chair. Then she came into his arms.

Later that evening, dancing, they covered their wariness carefully. They might be under observation in any of a hundred different ways: by probe beams, hidden cameras, or by individuals, android or human, whom they did not know. In spite of old loyalty, Ed Dukas was not entirely at ease with the thought of contacting Mitchell Prell. Yet, he wished to

avoid being trailed so that he could act alone and separate from the dictatorial and often panic-stricken opinions of others.

On Mars there had been considerable violence, too, though there had been no gliding, sinuous things that brought nocturnal terror. But here, too, there was a mingling of android and human being, with no visible marks to distinguish the one from the other, though to many the difference was as great as that between man and werewolf.

Barbara seemed to grow sleepy in Ed's arms as they danced. Ed yawned slightly. So they drifted from the room and back to their own quarters.

Ed pulled the old envelope from the pocket of the coat on the chair. As he had hoped, a message was traced waveringly on it: "*Go Port Karnak—then E.S.E. into desert.*"

Both Ed and his wife knew that Martian deserts surpassed all earthly conceptions of desolation. They looked at each other. The challenge was still in Barbara's eyes. The fact that she could carry a pack was a matter that had been settled long ago.

Now Ed risked speaking—in the lowest of audible whispers: "So, instead of going to bed, as people in our position should, we start traveling—fast."

He felt the safety pouch under his belt. Personal recordings were in it: tiny cylinders, a pair for each of them. A precaution. In the vaults on Earth there should still be others. But one could not always be sure of those. Some had disappeared.

As memory of what he thought he had seen in a tiny ink drop still clutched rather frighteningly at Ed Dukas's brain. It was a hint of how Mitchell Prell wrote his messages—in an utterly simple and heroic way, but with fantastic, dream-shot implications. Could it be part of android flexibility? Well, probably his fancy had tricked him, because things couldn't be that odd. Still . . .

Often Ed had felt bitter over the confusions created by the advance of science. But now enigmas led him on as thrilling-

ly as ever. There had to be wonders ahead, for thinking of Mitchell Prell without thinking of new science was impossible.

"Let's go, Babs," he whispered.

Casually, like ordinary guests checking out, they put two light valises into the conveyer and dropped to the main floor by elevator. The rest of their stuff they left behind. They paid their bill, and took an auto cab to the central tube station. In the washrooms they changed from leisure clothes to the rough gear used in the Martian wilderness: light-weight vacuum armor and oxygen helmets equipped with air purifiers and small radios—all fitted over light trousers and shirts. The remaining contents of their discarded valises they transferred to ruck-sacks.

In the station they mingled with farmers, miners and homesteaders. Couples such as themselves were common on Mars; they were going out to make their fortunes.

They bought their tickets to Port Karnak. Ed and Barbara looked around them. A half-dozen men among the waiting passengers wore no oxygen helmets. True, this underground depot was pressurized, but the outer thinness and oxygen-poverty of the Martian air had to be prepared for. The absence of helmets, then, almost had to be the mark of the android. To keep its vital processes going, the versatile vigor of vitaplasm merely disintegrated a tiny bit of its atomic substance, to make up for the shortage of chemical energy.

Ed and Barbara boarded the train with the crowd. Much of this underground system of transportation had merely been converted to human beings' use from that which had remained from the ancient culture of Mars. Behind the projectilelike coaches, close fitting in the tubes, air-pressure built up. Acceleration was swift. Covering the thousand-mile distance to Port Karnak took twenty minutes.

Once arrived, Ed bought the additional equipment they needed; then in a small restaurant they ate a last civilized

meal. They took an ato bus out along a glassed-in, pressurized causeway and descended at the final stop, beside a few scattered greenhouses, the outermost of which provided the city with fresh, earthly vegetables.

Here the desert was at hand, utterly frigid at night, under the splinters of stars. Deimos, the farther moon, hung almost stationary in the north. Irregular in shape, it looked like a speck of broken chinaware, just big enough to make its form discernible. Probably it was a small asteroid which the gravity of Mars had captured.

The Dukases began to plod. The desert came under their boots, and the solidity of the ground gave way, gradually, to a difficult fluffiness, like that of dry flour. It was millions of square miles of dust the color of rusted iron, which, in part, it was. Dust, ground to ultimate fineness by eons of thin, swift wind. Under the dim light of the sky, colors dropped in tone to a monotonous grayness that only faintly revealed the nearest dunes, and showed plumes of soil moving on the wind like ghosts. The dust made a constant, sleepy soughing against their helmets, like an invitation to death.

Barbara pressed Ed's gloved hand, as if in reassurance, and he pressed hers in return. Maybe they had eluded all pursuit or probe-beam tracking. Certainly the blowing dust itself would be an effective screen against the most refined radar device. Yet to vanish from the view of men could mean another kind of danger. It came to Ed that even when Mars had teemed with millions of its own inhabitants, perhaps no one had trod within a mile of where he and his wife were now walking.

The Dukases marched on for an hour without saying anything. But during a momentary rest Barbara gripped Ed's arm, thus establishing a firm sonic channel, so that they could talk without using their helmet radios, which might betray them.

"I hope we're not too crazy, Ed," she said. "Going out

into a wilderness like this, on the basis of a couple of strange notes, and with blind faith that somehow we'll be guided. I hope; I hope!"

Her tone was light and courageous, and he was more than ever glad.

"Think of our muddled home world, and make that a prayer," Ed said. "We might be doing something to help."

So they kept up their march through the night and into the weirdly beautiful dawn. The desert was rusty dun. The sky was deep, hard blue. The dunes were dust-plumed waves, in which a footprint was quickly lost. The rocks were wind-carven spires. Earth was the bluish morning star. It looked very peaceful, denying the need for haste. Its ring was a nebulous blur.

Barbara and Ed sucked water into their mouths through the tubes which led back from their helmets to the large canteens in their rucksacks. They swallowed anti-fatigue and food tablets. For a moment they even removed their oxygen helmets. There was no great harm in that; only the distention of blood vessels under swiftly lowered air pressure and an ache and ringing of eardrums, and of course the stinging dryness of the Martian cold against their cheeks. Forty-eight degrees Fahrenheit, below zero, it was just then.

"No more clowning," Ed said as they replaced their helmets. "We might get dazed by oxygen starvation and forget what we're doing."

They kept up their march, through the morning, past the almost warm Martian noon, and on into the frosty chill that came long before sunset. They were still plodding on when it was dawn once more. In spite of anti-fatigue capsules, they were getting pretty groggy.

In his breast pouch Ed had his pen and the envelope on which the latest message from Mitchell Prell had been inked. Now, surely, there had been time enough. So he ventured to disturb the writing materials. There were more words on the envelope: *"True on course—keep moving."*

So they continued to follow the pointer of their small gyrocompass, set to stab precisely toward east-southeast. Ed no longer questioned an odd miracle. It was simply there, and he was grateful.

An hour later Barbara glimpsed fluttering movement near by: a fleck of bright yellow. Then it was gone behind a large chip of stone. Then it appeared again. Ed saw it, too, for an instant. It fluttered, it chirped plaintively. It was an impossibility in the wastelands of Mars, or anywhere else on the Red Planet, outside of an air-conditioned cage. It was a small, earthly bird. A canary.

Barbara stared at it. Her blue eyes were bloodshot and scared. The tired droop of her cheeks deepened.

"Darling," she said rather lamely. "I think that fatigue is about to get the better of us."

"Think again," Ed said.

"I guess you're right," she answered. "Even without vitaplasm, it's not much of a stunt to give a guided missile or a spy-robot the form of a little bird, with television eyes. And a Midas Touch weapon, or something equally unpleasant, built into it. At the hotel in Port Smitty, it was unrecognizable among the other caged canaries. Here, though, it's unmistakably identified. Which means that whoever is guiding it—the police looking for your Uncle Mitch or friends of Granger's, or whoever else—don't care any more that we know what it is. We're helpless now—they think."

A dull fury came to Ed Dukas. He might have guessed that all chances of their eluding surveillance would have been countered carefully. This birdlike mechanism must have followed them all the way from Port Smitty, keeping just out of sight.

Then a more hopeful idea hit him. But reason conquered it. "No," he said aloud, gripping Barbara's shoulder so that she could hear. "If the pseudo-canary was Uncle Mitch's guide for us, it would have revealed itself sooner, and the messages on paper would not have been necessary."

In a flash Ed drew his own Midas Touch and fired it at the place among the broken rocks where the canary had just vanished. At a little distance there was the usual spurt of incandescence, fringed now with red dust. But from the projecting boulders near its base, a small yellow form spurted with a faint and musical twitter of mockery. Then a heavy voice spoke—one which neither Ed nor Barbara recognized just then:

"Better luck next time, robot lovers. Lead on!"

Thereafter, the false canary was careful not to show itself. And Ed was left with his frustrated anger, and with other uncertain thoughts. What if the written messages had not come from Mitchell Prell at all, but from someone else with an unknown purpose? Or, what if they were from Uncle Mitch, but had been prepared long ago and left to be presented to him, Ed Dukas, by means of some mechanical agent? What if—well—many things.

Using his tiny portable radar unit to locate the bird drew only a blank. Perhaps the little mechanism with a radio speaker for a voice was effectively shielded against such detection, even at short range.

To attempt evasive action would be a waste of time and waning energy. There was nothing to do but go on, see what developed, and trust to luck. There was the certainty that real pursuit would come, but what shape it would take remained unknown.

As Ed and Barbara plodded on through the day, their minds became fuzzy with weariness. Once, in a kind of retreat from present harsh facts, Ed's thoughts touched a vivid daydream that he'd had before, of a planet of some star. He looked down at imaginary dry ground under imaginary feet and saw that each pebble under the strange, brilliant sunshine had a little hole in it. And something shaped like a cross, with four rough, brownish-gray arms that could bend in any direction, scrabbled away, flat against the soil,

its equipment glinting. The thickets all around were stranger than those of Mars.

Yes, it was just a daydream, originating from within himself, like an old, half-buried hope of some distant exploration. He wondered if it could ever still have any fulfillment, or if that even mattered any more? Perhaps, for all he knew, his wife and he were now headed for an even stranger region.

Ed shook his head to clear it. He did not want to disturb the envelope in his pouch too often. To expose the ink to the dried-out Martian air, while the writing was in progress at hour-hand speed, might spoil a vital message. But at last he chanced it. It seemed that the writer was not much troubled by the presence of the bird-thing or what it might mean.

Barbara and Ed read avidly: "*Base of capped granite rock before you. Lab.*"

Barbara nodded toward a formation which loomed a half mile ahead in the freezing cold of late afternoon. The slab, balanced crosswise on a slender pinnacle, identified it beyond doubt, though there were other similar spires around it. It cast its shadow on the sunlit dunes. Or was all of that dark, irregular patch shadow?

Ed Dukas and his bride had not enjoyed the luxury of natural sleep for a long time. But summoning their flagging strength, they hurried forward. Ed felt that at last he was approaching the solution of ten-year-old enigmas.

The darker area at one side of the capped rock was not all shadow. But the Dukases had scant attention for the bluish masses of plushy stuff that grew in this aridity. At another time it might have been fascinating, for it was vegetation related to the android as moss is related to a man. It was a growth of vitaplasm—another of Mitchell Prell's experiments. But Ed and Barbara had no chance to ponder this.

They located an eighteen-inch cleft at the rock's base. Edging into it, they found an irregular stone pivoted on steel hinges. To their touch, it closed behind them, and bolts clicked. From the outside now the outline of the door would

seem merely a pattern of natural cracks in the granite pinnacle.

Atomic battery lamps lighted the passage, and there were more heavy doors, some of them of steel, for Ed and Barbara to bolt behind them. The place was like a small, secret fortress. At the bottom of a spiral stair, beyond a small air-lock, was Mitchell Prell's latest and perhaps last workshop.

He must have blasted it from the crust of Mars without help. It was a series of a half-dozen rooms and was no larger than a fair-sized apartment. Smallest of all was the combined sleeping room and kitchen; and there the evidence of months or perhaps years of absence was plainest. The bunk was thick with dust, and food remnants were blackened on unwashed plates. The air, of earthy density, smelled of decay and a strange pungence. The floors and walls were crusted with patches of the tough, bluish growths seen outside. It was suggestive at once of both fungus and moss but was really like neither. It had a pretty color under the lamps, which had certainly been burning for a long time.

Ed and Barbara removed their oxygen helmets and began a swift exploration of the premises. The rooms had all the marks of lone bachelor occupancy by a man too fearfully busy with his own deep pursuits to waste time on more than the barest attempts at housekeeping. Apparatus was everywhere. There were even recognizable parts of a helicopter—the one, no doubt, which had brought Prell and his equipment to this refuge.

At first they thought that he might since have fallen victim to some violence or accident. And then they found his body in a rectangular, plastic-covered tank, submerged in a cloudy, viscous fluid. It was a standard sort of vat, much used in laboratories in repairing extensive injury and restoring a destroyed body from a personal recording—either in protoplasm or vitaplasm. Near by, there were three similar vats, which, when opened, proved to contain only fluid.

Barbara and Ed looked for a long moment at Mitchell

Prell's forever young face. It was peaceful in death that was not quite death; for of the latter you could never be sure any longer, unless it was the death of the species.

If there were guile behind that gentle face, it did not show. If there were darkness of purpose, or stubborn unwillingness to recognize errors that he had committed in a civilization that tottered as it reached for greatness, it could not be seen. But in this refuge, one fact was plain: Mitchell Prell had gone on with his work in a super-biology.

Ed wandered over to a beautiful microscope of a standard make. Its attachments also started out from a familiar design. It was fitted with dozens of special screws and levers. When Ed, and then Barbara, peered into its eye-piece, they found that each of these screws and levers could manipulate a tiny tool, almost too small to see with the naked eye. There were minute cutters, calipers and burnishing wheels. Set up under the microscope there was even what seemed to be a tiny lathe. In fact, there was an entire machine shop on an ultra-miniature scale. And there were tiny, tonglike grasping members, intended to serve—on such a reduced scheme of things—as hands, where the human hand, working directly, would have been hopelessly mountainous.

In addition to this equipment, there were exact duplicates of the vats across the room and their attendant apparatus, except that each entire assembly was less than a half-inch long. In one vat there was a human figure much smaller than a doll, yet perfect.

Barbara laughed nervously. Even in this century of wonders, the human mind had its limitations for making swift adjustments. The laugh was a denial of what her eyes beheld.

Ed Dukas's wide face looked at once avid and haggard. Beside the tiny vats there was also another microscope, complete in every detail, yet of the same relative dimensions as the little figure in the vat. But this lesser microscope was of the electron variety. It had to be. For at this reduced size

light waves themselves were too coarse in texture to be effective for close-range work.

Ed turned slowly toward his young wife, whose eyes were alert and wonder-filled in spite of her weariness. He noticed the pleasant wave in her hair. He noted the charming curve of her brow, the tiny and pleasing irregularity of her nose. And what was all this attention but a clinging to an object of love when facing a strangeness so great that it scared him as he had never been scared before. Ed Dukas knew that his face must have gone gray.

Now his words came slowly and precisely: "Babs, I've told you that I watched part of Mitchell Prell's first message being written. That in the moving speck of wet ink, for an instant something looked like a man the size of a motel! I thought I'd imagined it. But is that what Uncle Mitch is now? An android so small that the only way for him to write a note to a person of usual dimensions is to surround his own body with a droplet of ink and to drag himself across the paper, making the lines and loops of script?"

Barbara looked at him obliquely, doubting his seriousness.

"Aw, now, Eddie-boy, take it a little bit easy," she said. "Please do."

He didn't answer her. He let his unchanging expression and many seconds of silence do the answering for him. His pulses drummed in his ears.

At last he said, "No, darling, I mean it. There's no reason why an android no bigger than the smallest insects can't exist. And the signs of what Mitchell Prell did in this laboratory are plain enough.

"Working at first with the larger microscope and the miniature tools and machinery under it, he duplicated a now common kind of biological apparatus in half-inch size. In its tank he caused to grow the simulacrum of himself that you can see. Aside from the difference in dimensions, that much has been both possible and fairly common practice for years. Its brain having been stamped with all phases of his

memory and personality, it became him when it awoke. His own body he left inert and preserved in the large vat. But he was not finished. He had made just one step toward the degree of smallness that he wanted to reach. So he started over from scratch, constructing first another microscope and then relatively minute machinery and tools, fine beyond our sight. Under that tiny electron microscope I'll bet there's another, smaller machine shop, and a smaller tank from which a mote-sized Mitchell Prell emerged. It must all have been quite a job. It's not hard to see where those ten years went."

Barbara was silent for a long time. Finally, she said, "It sounds reasonable—superficially. But still, is it possible? Consider a brain. It can come in many sizes, from an ant's to a human being's. But all are made of molecules of the same dimensions. And it has been pretty well determined that a brain must be always about as big as a human being's to be truly intelligent. Trying to cram such intelligence into a smaller lump of gray matter—composed of the familiar molecules—would be like trying to weave fine cloth out of rope. How can you get around that, Ed?"

"Maybe I can guess," he said. "With smaller units. How about the electron, Babs? Far smaller than the molecule, certainly. And it's been the soul of the best calculators—thought machines—for a couple of centuries. There isn't any doubt that a brain of microscopic size could function by far finer electronic patterning. No, it probably wouldn't work in natural protoplasm. But we already know the flexibility of vitaplasm: easy to redesign, capable of drawing its energy even from a nuclear source. Well, you figure it out. What have we here but other android advantages? I think my uncle once told me that he meant to go where no one could go exactly as a human being."

"All right, Eddie," she conceded. "I guess I'm persuaded. Proud girl, me. I've got a smart boyfriend. And your uncle—he skips blithely from the bigness of the interstellar re-

gions in his thoughts to the smallness of dust! And he seems, *actually*, to have done the latter—in person! Is that what we're supposed to accept as truth? If so, he must have been with you all the time, or at least for quite a while. On Earth, even. And he must have come out to Mars with us. He was right in your pocket, riding with the paper and pen. To write, he must have gunked himself up good with the ink inside the pen point. Ugh—what a thought! And maybe he's still in your pocket right now. He—or a tremendously shrunken equivalent of him. Does all this stack up right in your eyes, Ed?" A pallor had crept through Barbara's tan.

"Pretty much so," Ed replied heavily.

"So what do we do now, Ed? Try to follow your uncle's path—down?"

Ed's flesh tingled. To follow Mitchell Prell *down*—a course more weirdly remote than traveling to the stars. He did not answer Barbara. He unzipped his pocket. He could not tell whether a minute android emerged or not. There were no further messages on the envelope.

But from a sound cone in a shadowy corner of this workshop, there suddenly came tones that a decade had not rubbed from his memory:

"Nipper—hello! Or is it always Ed now? So we've come to Mars together. And you with Barbara! Well, maybe that is an agreeable complication! Now we can talk. Here I have the right amplifying apparatus. I need help, and you always seemed the best—and enough like me. I know your doubts about science, and I don't blame you. But I'm still the same—wanting to learn everything that I can, feeling that everything should work out right."

The stillness closed in again. Ed and Barbara looked at each other. Technology was full of tricks—the possibility of a thousand illusions. Could he even trust a voice, made so like Mitchell Prell's used to be? And could he trust the mind behind it? Even if it truly was his uncle's?

"Work out right!" Ed growled mockingly. "That sounds

almost pious! If you are what you say you are, you were on Earth and have seen everything. You know then how right things have been! I was around when the Moon blew—remember? And no scared hotheads caused that. But there are plenty of them now. And from here on Mars, I've expected to see Earth momentarily puff up into a little nova."

There was a sigh from the sound cone. "So I'm to blame—at least partly—for helping to give those fools something to be furiously right or mistaken about," Mitchell Prell's voice replied. "Well, I was what I was, and I am what I am, Ed. I'm sorry about many things that happened. But I can't erase them. I've urged you to come here to help me try to counteract them. I don't think you'll stay angry with me, Ed. Come where I am—you and Barbara. It can be done quite quickly now. I have two forms prepared. They will take the lines and personalities of anyone. Just set the dials above two of the unoccupied vats at one hundred—full energy. Lower yourselves into the fluid. Clothes, or lack of them, won't matter. Your own bodies will sink into suspended animation."

Again the voice from the sound cone faded out. Ed's and Barbara's eyes met in a tense congress of thought. They were being asked to leave their natural, physical selves behind and to become beings of vitaplasm. To many, that was horror in itself, even without a radical change in size. Then there was the fear of loss of identity. To be an exact duplicate in mind and memory might not necessarily mean to be the same person. Here was a metaphysical problem elusive and hard to answer. What others of experience might have told you could never quite satisfy you. You had to learn for yourself.

Beyond all that, there was that drop, down and down into tininess, to where physical laws themselves must seem warped by the relativity of size levels, and to where nothing remained quite the same. Could one's mind even endure the difference?

For a moment Ed felt cornered and panicky. But some-

thing eager and questioning came into him. For the first time he wished that Barbara had not come with him.

Finally he said, "I've got to go down, Babs. There just isn't any other way."

"What's sauce for the gander is sauce for the goose, Ed," she said. "With us, that was settled a while ago."

He didn't protest. She was resourceful. She'd be a help, not a trouble. And he knew that love of adventure was as strong in her as in himself. So the decision was made.

Suddenly they heard a distant clink and hammering. Metal against stone. The canary had followed them to Mitchell Prell's underground fortress. And of course the little mechanism had been merely a scout for some larger party farther to the rear.

Again the words came from the sound cone, but in a whisper, "I was pretty sure you'd be followed, Ed. But we should still have considerable time. It'll be hard for them to break into here—without destroying everything. And I think they'll want to see what I've got."

Ed Dukas had never before considered his brilliant tireless uncle in any way impractical. But now he was sensing a certain inadequacy and felt that Mitchell Prell truly needed him. If it was Mitchell Prell, of course—if the voice itself wasn't a trick. But now Ed was at least more confident that he was not being fooled. What doubt remained had to be part of many calculated risks.

"All right, Uncle Mitch," he said.

Barbara smiled at him rather wanly, but her eyes held a glint. He kissed her.

"So here goes, eh, Eddie?" she said.

"Be seein' yuh, sweetheart," he said, taking her in his arms.

VI

STRIPPED of their boots and vacuum armor, they set the controls and lowered themselves into the gelatinous contents of the tanks. A warm, tingling numbness flowed into them at contact with the viscous, energized fluid. Weariness stabbed into their muscles. Their knees buckled, and they sank deeper into the gelatin.

"All okay, Babs?" he asked.

"Okay, Ed."

Then their faces went under that surface. Their minds numbed and were blotted out. They no longer needed to breathe.

The journey downward into a smaller, or, in a sense, a vaster region, was made without their awareness, in a single step. There was no need to pause at middle size, represented by the tiny but easily visible doll-like figure in the minute tank. Mitchell Prell's labors in two size levels need not be done again, for that work was finished. The direct path was prepared. There was a flow of impulses, like that of the old-time transmission of photographs over wires. Gelatins already roughly of human form responded, swirled and moved tediously, and took sharper shape, in a still-smaller vat. And it was the same with the brains meant to harbor mind, memory and personality. They also were repeated in a finer medium, and by a different principle than their originals—but nonetheless repeated. So, in slightly more than an hour, the essences of two human beings were re-created in the dimensions of motes of dust.

Awareness returned gradually to Ed. At first it was like a blur of dreams, out of which came realization of a successful transformation, and of where he must be. Panic followed, but briefly. He was struggling violently in a

thick, gluey substance. His entire body, even his face, was imbedded in it. He was certain that he would smother—yet the impulse to breathe was subdued.

Fighting the sticky stuff, he knew that he possessed great strength—relatively. Some of this was the android power in him. Perhaps more of it was the increased relative toughness of everything, in lesser size. An ant was relatively stronger than a man—a phenomenon of smaller dimensions. And here, even a gelatinous fluid seemed like heavy glue, its molecular chains long and tough. Water itself, not lying flat, but beading into dewdrops, would have seemed almost as sticky.

Ed Dukas, or his tiny likeness, got clear of the vat and its contents, though much of the latter still clung to him. On all fours he dragged it with him, leaving a trail of it in his wake on a rough, glassy surface. He kept spiraling around and around until he rid himself of most of the gelatin.

With avidness and wonder and dread, his mind scrambled through a moment of time to grasp the truths of his present state and to test them. Even the act of *existing* in the body he now inhabited was indescribably different. His mouth was almost dry inside. He still could draw air into his nostrils, but breathing became unnecessary before some source of energy that was probably nuclear. His hands and his nude body still looked slender and brown to him. And he retained memories—of people he knew, sights he had seen, and of things he had learned. Here he seemed to remain himself. Those memories were clear enough; but were they already losing a little importance, were they too gigantic to be concerned about in this place?

That thought, again, was panic at work—a sense of separation from all that he held familiar. For the atom lamp towering over him seemed as remote as the sun. The form of the less-than-miniature electron microscope seemed a metal-sheened tower. And in his mind there was even the certainty that his present form must be of a wholly different design

inside to meet different conditions. He knew that he could feel the thump of a heavier heart, circulating relatively more viscous fluids.

And something about his vision had changed. Close by, everything was slightly blurred, as if he were far-sighted. Farther off, objects became hazed, as by countless drifting, speeding dots that weren't opaque but that seemed—each of them—to be surrounded by refractive rings that distorted the view of what lay beyond them. And because there were so many tiny centers of distortion constantly in motion, vision at this middle-distance never quite cleared but remained ashimmer. Were those translucent specks perhaps the auras of air molecules themselves?

At a greater distance, clarity came again. For there the haze which was not haze at all but which consisted merely of seeing too much detail—in too coarse a grain, as under too much magnification—was lost. Light and dark, and familiar rich colors. And he saw the whole room around him almost as he used to see it, except for its limitless vastness.

For a little while Ed wondered further about his new eyes. They were responsive to familiar wave lengths of light. Those wave lengths were not too coarse—at least when reflected from farther objects. For nearer things, he was not at all sure that he could see even as well as he could by ordinary light. Was his vision, in this segment, perhaps electronic, then? Did he see, close at hand, fringed hints of strange, beautiful hues? Were these electronic colors? Or were there infinitely finer natural wave lengths, far above the known spectrum, which too-massive instruments had been unable to detect?

This question was dropped quickly, because there was too much more. Now he looked again, very briefly, out into the depths of air, full of drifting debris—jagged stones that glinted, showing a crystalline structure, twisted masses like the roots of trees, though they had the sheen of floss. All of it was dust of one kind or another. Ed could even hear the

clink and rattle as bits of it collided. Everywhere there were murmurings of sound, which made a constant, elfin ringing never heard in the world he knew.

Gingerly now he crept across the rough glass surface, back toward the vat from which he had emerged and its companion. Barbara was his first concern. There she was, in the second vat, imbedded in a bead of gelatin. Already she was trying to fight free. He reached both arms into the stuff and tugged at her shoulders to help her. He lifted her out easily and helped scrape away the adhering gelatin, while he worried about how she might react to a tremendous change. To counteract the shock of it, he kept up a running flow of talk, in a voice that even seemed a little as it used to be:

" . . . We made it, Babs. Down to rock bottom, you might say. I don't think that any conscious human shape could be made much smaller. Or any machine, for that matter. Remember some old stories? Little men lost in weed jungles, fighting spiders and things? Strange, unheard-of adventure, in those days! Maybe we can even try it sometime. Except that a spider, or even an aphid, wouldn't notice us. We're too small."

A little pink nymph with a rather determined jaw, she seemed only half to listen as she stared around with large eyes.

Later, like two savages, they were clothing themselves crudely in scraps of lint torn from what looked like a sleeping pallet. A fiber was knotted across it in a way that reminded Ed of the safety straps by which passengers of planes and space ships attached themselves to their seats during take-offs and landings. Here, Prell, the tiny android, must take his rare moments of rest. Some of the lint was far finer than spiderweb, but it was still coarse to Ed and his wife in their present state, as they wound its strands around them.

"You look beautiful, darling," he said. "You're just as you were."

Barbara smiled slightly. "Even here I'm vain enough to respond to compliments, Eddie," she answered. "Where's Prell?"

Her voice was a thin thread in the keening murmur of sounds. And it was worried. Ed and Barbara both craved the reassuring presence of someone of experience here, where everything was changed—where minute gusts of air seemed bent on hurling you upward, so that you would float helplessly, like a mote. You stood up gingerly, meaning to try walking a step. But that mode of locomotion seemed not only unsafe here but impractical. You could be swept away, and in the vastness all around, how could one mote find another again? Too much of what you were used to was lost already. Even the habit of walking no longer functioned properly. The air was a buoyant, resisting substance, a prickling presence of individually palpable molecular impacts, and there was little traction for one's feet. Perhaps, then, here you swam in the air.

Ed spoke at last: "My uncle can't be far away. He'll come to us. It's been only a moment."

Barbara clung to him, afraid. "Eddie, am I me anymore? Can I even find old ways of talking, and old subjects to talk about? Here? Everything seems too different. Damn—I never could accept the idea of there being two of anyone! Us up in those other tanks—giants asleep. And yet us here! Maybe we're different already—shaped by other surroundings! And remember how little we are and how helpless. Moving a couple of inches would be like walking a mile. And we came here to see if we could find a way to straighten out the giant affairs at home. We're *androids* now, aren't we? A special kind. But we still have the capacity for the old emotions. Damn it again, Eddie, everything around us in this place is so strange. But it's beautiful, too."

He patted her shoulder and said nothing. But her thoughts paralleled his own.

Suddenly there was a rumble, like distant thunder. In a

more familiar size level, it would have been a clink and a thud, coming through many yards of granite. They both recognized it. Ed even chuckled.

"Whoever or whatever was following the canary machine," he said. "Remember?"

Just then Mitchell Prell's simulacrum appeared, a comic, bearded figure wrapped in a few strands of lint that suggested woven twigs. He swam out of the depths of atmosphere—the fall-guy of an era that had stumbled over its own achievements. And in several of those very achievements, he had taken refuge.

He alighted near Ed and Barbara and wrung their hands cordially. Then words spilled out of him excitedly: "Ed. Barbara. We've got to hurry. But first we should put our minds straight about one another. I know that back home you were on the side of responsibility and good sense. Well, so am I. There haven't been many new quirks added to my viewpoint since you first knew me, Eddie. I want knowledge to blossom into all that it can give us. I think you do, too. Now tell me how you feel."

Mitchell Prell could still inspire Ed Dukas. Even here, at this opposite, smaller end of the cosmos, he imagined again his splendid towers of the future.

"There were moments when I felt pretty bitter," he said, in not too friendly a fashion. "But in the main I'm with what you just said—all the way. I put my life on it as a pledge."

Barbara nodded solemnly.

"Thanks," Prell answered, the breath that he'd drawn for speech sighing out of him. "I'm more grateful than I can tell. You two may think that we're too tiny—that our size makes us powerless. I don't believe that's true. I was on Earth as I am, you know. I went there and back—undetected—on space liners. But while on Earth I missed many opportunities to act against danger. Maybe I'd been here too long, down close to the basic components of matter, studying them. And

I went to Earth poorly equipped in both materials and experience. Well, I think you can see how it was. Let it go for now. Visitors are at our door. I suppose we've got to try to meet them in the manner that they deserve."

"Call the shots!" Ed said impatiently.

Mitchell Prell smiled rather wistfully. "The main part is done," he replied. "I set the small remote controls of the large vats for revival of the bodies in them—our larger selves. That was why I was delayed in getting to you here. They are colossi. They cannot hide. And they must be defended. I'm sorry, they are better able to defend themselves than we are to defend them. At least they will a better chance alive than inert. Revival takes a little time, but in a moment you will see."

Ed did not quite know what to think about this action on his uncle's part—whether to agree to it or to suspect that it was somehow a mistake. Circumstances were too strange here, and he was too inexperienced. And the whole situation itself was fraught with confusion for him. Two selves, both named Edward Dukas? It was not a new circumstance in the ideas of the times. You knew that it could be. Yet it remained a muddle of identities hard to straighten out. Barbara clung to him again, her feelings doubtless similar to his own.

"It's happening," she whispered.

And it was. From their perch on the scored, glassy surface under a miniature electron microscope, they looked out past the minute tanks and the attendant cables, crystals and apparatus that had given them special being, and across the shimmering void of air, they saw those other vats, glassy, too, and tall as mountains.

It seemed then that the mountains opened, unfolded, grew taller, disgorged Atlases that stepped dripping over a cliff wall. There was no connection of mind now—these three giants were other people, for the link had been broken in the past. There was no blending of consciousness.

Now there were vibrations almost too heavy in this minia-

ture region to be called sounds. They were more like earthquake shocks. But Ed realized that they were just the noises of normal human movement—the giants Ed, Barbara and Mitch putting on their boots, the grind of their footsteps. Meanwhile they conversed, it seemed; but their voices were only a quiver, a rattle, with a hint of worried inquiry. The giant Mitchell Prell seemed to make suggestions.

The lesser Prell must still have understood what was being said. For now he gripped a roughly made microphone and talked into it. His words were amplified to a seismic tremor as they emerged from the sound cone on the far wall; but to Ed and Barbara they were still directly audible from the speaker's own lips. "You've come down to me successfully. Now we must see what will happen. Ed, if it is only the police at our gates, perhaps it would be best simply to present yourselves as citizens. You and Barbara have rights. And you've fulfilled your pledge to them. They can't harm you. Beyond this, I must apologize to you both. You have made a difficult journey to what must seem to you a frustrating blank wall—without experiencing anything very new. That is a defect of being duplicated. And there is no time now to blend into your minds the memories of the descent into smallness. I'm sorry. Mitchell Sandhurst Prell—yes, you, my overgrown former identity—show them what to do. But for heaven's sake, move this workshop of mine to a slightly less exposed place!"

Because he was like his old self, the smaller Ed Dukas still thought as his original did. So, after all, there was that much contact. He understood the frustration that had just been mentioned, plus the confusion of not having seen the reality of another size level. This failure could even involve suspicion of his uncle's purposes. But there was loyalty and belief, too. From the basis of parallel minds, the lesser Ed felt all these emotions personally.

So he moved quickly, closer to the tiny microphone, bent on giving reassurance. He shouted into it; and of course his

words came out sounding somewhat mad: "Ed, it's me! Ed! Honestly! And that was a real Mitchell Prell speaking. Take care of yourself—and Babs—because you're me—or still part of me. And we both love Barbara—in any form. Hello, Barbara, darling."

There was no time to say any more, for now there began a steady, heavy vibration, growing gradually stronger. In a moment he guessed what it was. A huge, high-speed drill had been brought into play against granite. Very soon now these caverns would be invaded.

And more was happening. There were more seismic tremors. A colossus moved nearer, bringing its shadow; its wet clothing seemed to be woven of cables instead of thread. The face, briefly glimpsed, was a huge, pitted mask, bearded with a forest of dark and tangled trunks. A wind came with him, caused by his motion. He was that other Prell.

"Hang on!" his tiny android likeness yelled.

Ed of the dust-grain region drew his Barbara down. They flattened together and clutched part of the intricate but roughly made apparatus attached to the vats from which they had emerged, just as the glassy floor under them tilted, and they were almost swept away by gusts of air. Wires had been disconnected, and now the whole assembly—large microscope with the miniature machine shop; middle-sized tank and middle-sized doll figure under it, and the lesser electron microscope with its similar though reduced equipment—was being carried and hoisted.

It was set on a high shelf. And what must have been a translucent jar was placed in front of it to hide it casually. Maybe there was no time for anything else, for that rough vibration of the drill was becoming rapidly more pronounced.

"They ought to put on oxygen helmets!" Barbara shouted in the quaking tumult. "These vaults will be unsealed! And they aren't built to live in Martian air!"

Maybe the three giants even heard her, through the mike and sound cone. But they would know, anyway.

From the twilight of the jar's shadow, Ed could still see into the immensity of the room. The colossi were donning their heavy gear.

The vibration had become a gigantic rattle with creaking, crackling overtones, audible only to micro-ears. Ed felt almost shaken apart and dazed by it. Any instant now the drill would break through into the room. But he didn't anticipate much real trouble. It wasn't reasonable. He felt fairly sure that it was the police who had followed his larger self here. They had their duty to give protection, not harm. Their power might be warped by the fears and prejudices of the times, but not beyond reason.

He knew that there would be a jolt when the drill came through. So he scrambled over to the pallet and pulled from it a long bit of floss, thicker to him than a rope. Quickly he bent one end around his waist and knotted it, and fastened the middle of it around Barbara. The far end he passed to his uncle.

"Tie on!" he shouted. "So we don't get separated. And hold tight to anything solid!"

The break-through came, and it was not too bad. It felt like a monster ram hitting the world one sharp, stinging blow; then the spinning mountain of the super-hardened drill bit—all of a yard across, it must have been—braked quickly to stationary. There was no tumultuous outrush of air of earthly composition and pressure. The drill hole had evidently been capped.

Ed saw the colossi there in the room—the originals of himself, his wife and his uncle—grimly clad for Mars. They had taken up positions a little behind this obstacle or that, not ready to trust entirely but more or less sure. He knew how it was—particularly with his other identity. There had to be this tense moment before someone, known or unknown, spoke. They were armed. At the hip that was still his own in a way hung the Midas Touch pistol that he remembered, though it was expanded seemingly a million fold.

The outcome was different from what he could have hoped or expected. There was no voice of challenge or greeting from behind the drill. You could not see beyond the dark space around its jagged rim. There was only perhaps a small, intuitive warning before the neutrons of another Midas Touch struck, and a few of the atoms of metal and flesh and stone exploded in a narrow, sweeping curve, making a flash in which all visible details became lost and a volume of sound and quaking in a confined space that, of itself, could have killed.

The little Ed Dukas could be proud of his forerunner, for he was quick enough to have half drawn his own Midas Touch, just as the blaze of light came.

It didn't do any good. The lesser Ed's android consciousness was rugged enough not to be lost, even as he and his companions, tethered like beads on a string, were sucked upward into the swirling dust of the atmosphere. So he saw how the Midas Touch, discharged from behind the drill, cut slantingly, like a sword blade, across the room, its narrow beam slicing through the three giants almost simultaneously. Then, for a moment, coherence of impression was lost in swirl and glare and tumbling motion. But when the tumult quieted slightly and he floated on choppy air currents, he saw the crumpled, mountainous forms. Mitchell Prell—colossal version—had been chopped in two at the waist. The heads and shoulders of the other two giants had ceased to be.

To Ed Dukas's microcosmic nostrils, the smell of burned flesh remained unchanged. Nor was his capacity for horror any different. It came after that small, numb pause of doubt of what he had just seen. He heard the lesser Prell and the lesser Barbara shout from beside him. They had not been torn loose from the joining strand—luckily.

At first he thought that the attack had come from someone other than those who had trailed him. But then the drill point moved forward. From behind it stepped several men, wearing the trim vacuum armor of Interworld Security—

usually honorable in the past but now sometimes made shaky and corrupt by the doubts within its own ranks and among the people about what, within the realm of human effort, was good or bad.

The group had a leader. Ed and his companions drifted idly in the air, near the man's shoulders, but his helmeted head still loomed in the sky of their present world. Old personality hints were hard to translate from such magnitudes; but the cocky briskness and triumph showed. There were rumblings and quakings of speech. Ed began to recognize repeated patterns in the rattle of it. Centuries ago, the deaf had had a way to "hear"—by sense of touch. And by feeling the heavy vibration, Ed knew that he was "hearing" syllables too heavy for his present auditory organs to detect as such: ". . . Prell's lab . . . Dukas led us . . ."

Ed could still understand only scattered scraps; but the skill was coming—now, with his body, he felt the stinging discord which must have been a harsh laugh.

Now a gust of wind from a vast swinging arm lifted the strand of floss and the three who were tied to it upward. Beyond the view window of the helmet, Ed saw the tremendous face—rolling plains and hills, pitted with pores and hair follicles, and scaled with skin, beneath which the individual living cells were easily visible, the latter mysteriously haloed around the edges with a faint luminosity. The mouth was a long, rilled valley, crescented into a hard grin. The nose was a crag. The eyes were concave lakes set in rough country and islanded with iris and pupil.

"You know him, don't you, Eddie?" Barbara said.

Size did not hide the bullish quality or the gimlet stare. Rather, it emphasized an ugliness of character.

"Of course," Ed answered. "Carter Loman, who was with Chief Bronson and who spoke to us before we left. An unidentified official with whom we made the deal to come here. Nice guy. Feels that he can be the whole of the law out here in the remote Martian desert."

Again Loman addressed his henchmen. Ed was getting better at understanding the vibrating words: "We'll clear everything out for shipment back home. I've got to study this equipment! But before we even open a door we'll sterilize everything with a four per cent neutron stream. That'll kill even that damned vitaplasm! Fascinating, devilish stuff! Too bad, in a way, to erase it here—because I think I know what's still around, and I'd like to see. But we can't take the risk. A snake I might give a chance, but not a robot or robot-lover!"

Loman paused, then spoke again, turning his head this way and that, directing his words toward the invisible: "Prell, you're dead, but are you still somehow here? What *can't* happen in the crazy age you helped create? On Earth we psyched your nephew. Don't think I didn't guess what you were doing. Now we've taken your carcass into the other room to psych your dead brain. In a few minutes we'll know. There'll be ways to stop your kind of folly!"

As the great head continued to turn here and there questioningly, the still-living Mitchell Prell shouted in derision: "Here I am, crusader!"

But there were no microphone and sound-cone in action now, and Loman did not hear him.

Maybe Barbara's present eyes were too minute to shed tears, but her face looked as though she were weeping. "Loman is the worst kind of fanatic," she said. "Sure that he's right, and blind about it. Sadistic, energetic and, I suppose, clever."

"I'll tell you more about him," Mitchell Prell offered softly. "His face gives a faint glow—a fine radiation that only our eyes can see. Radioactivity. It wouldn't be visible on Earth, where oxygen gives even an android bodily energy. But on Mars—or wherever else that oxygen is in short supply—vitaplasm adapts readily to other energy sources. It would be silly for him to carry air purifiers in that helmet he's wearing."

Ed Dukas looked down at his own arms. Yes, they glowed,

too, though he'd hardly noticed it before in the light of the great ato lamps.

"Then Loman is an android who hates androids!" Barbara breathed. "Well, I guess that hating one's own kind has happened often enough before. But an android in the Inter-world Police? Under physical examination, he could never hide what he is."

"Legally, they still have equal rights," Ed answered. "That much I'm glad for. They couldn't be kept out of the Force. But there could be other twists, not so unprejudiced. A thief sent to catch a thief, would you say? Something strong, and full of self-hatred, sent out to match strength? Tom Granger, and thousands of others, might think like that."

Ed Dukas's anger broke through at last, slow and terrible. Maybe he had been too startled before for exact meanings to register. The other Barbara, whom he loved, had been murdered, her body mangled. It was the same with his own other self, and his uncle's. Those bodies had been the one available route back to all familiar things and out of this weird place of expanded forms, warped physical laws, keen-ing sounds and distances multiplied a millionfold. But now those bodies were gone. And even if beings invisible in smallness could escape death in neutron streams from Midas Touch pistols turned low, there would be little left that they, in their tininess, could work with. They would be stranded here in a microcosmos for as long as they could survive, helpless to move even a pebble.

These thoughts were fringed with a homesickness that Ed had never before known. He wondered if a little dust-grain android could go mad. It was Carter Loman's fault. No, the responsibility extended further than that! To Tom Granger, the rabble-rouser, and those like him, and those who listened. And to a renegade android leader of mythical origin. Yes, it was Mitchell Prell's fault, too, and his own for coming here and bringing Barbara.

With his two companions, Ed Dukas floated high in the

air, supported by molecular impacts, near the helmeted head of an Atlas called Carter Loman, and felt his fury and the helpless contrast of dimensions. This giant, aided by his henchmen, had all of the advantage, while Ed and his wife and uncle could be blown away merely by the wind of that monster hand in motion.

Loman was throwing words at Mitchell Prell again, his voice coming easily through the thin face plate of his helmet. It was not a true sound to micro-ears. Rather, it was a heavy quiver in the air, felt with one's entire body. "Prell, I'm sure you haven't stopped existing. Don't think that I can't understand how. And you did things to me. There was your Moonblast, but that wasn't the worst. Everything you stand for must be stamped out. Even if we all go with it."

Maybe it was then that Ed's thoughts became crystalized. His anger was turned cold and clear, as if by need. Although Ed was of vitaplasm himself, he felt no loyalty to kind. In fact, he was still far from reconciled to the condition. But an enemy of reason was an enemy to all men of whatever sort.

His wits were sharpened. Suddenly a realization of the power in smallness came to him—combined with the hardness and flexibility of flesh that made even such dimensions and powers possible. Android powers.

"I guess everybody must have a breaking point of fear and exasperation," he said softly. "We were born to it. To be crowded from the Earth can seem a terrible idea. But maybe even that is as it should be, and good. I can't agree that pushing everything into extinction in an open fight can be any better. We've gained too much. There is too much wonder ahead. And maybe, small as we are, we can quiet the leaders. Under the right conditions, I think we could handle these giants—even kill them if necessary. Quieting Loman and Granger might help a little."

"I know," Mitchell Prell answered. "I thought of it myself. Perhaps I didn't have the nerve to carry the idea

through. Maybe that was why I wanted you to come to me on Mars—where I had the apparatus to change you. Microbes are smaller than we are, yet they used to kill men.”

Ed Dukas saw his wife wince. But this couldn't make any difference now.

“Ed and Barbara, I'm sorry for all I've gotten you into,” Prell added.

“Don't be,” Ed told him. “Who can regret a chance to try to do some good in what seemed a hopeless conflict? Now, first, let's get out of here, if we still can or ever could.”

Ed felt some of the command switching to himself—strange, because his uncle knew far more about these regions than he did. But Mitchell Prell was made more for study than for physical action. And he was somewhat fuddled by the effects of the miracles he had helped produce.

VII

THE COLOSSI were piling Mitchell Prell's movable equipment into a corner, where Midas Touch pistols, turned low, could play neutron streams against it. Then they would no doubt scour walls, floors and ceilings with the same corpuscular beams. The air itself would heat up considerably. Combustible floating dust, would burn to finer dust. Drafts would seem blasting hurricanes.

“There's a way out—if we hurry,” Mitchell Prell said. “Imitate my movements.”

And so they swam in the atmosphere. But without other aid it would have been slow going indeed. But the motion of dust particles revealed the direction of air currents that could be gotten into and used to cover distance.

Still, progress back to the shelf and the microscopes, and the tiny workshop from which they had been blown but a few minutes before, was agonizingly slow. By luck and scanty concealment offered by the jar, this paraphernalia

had not yet been discovered or moved by Loman and his men.

Ed and his companions came to rest at last on the rough glass surface where little machines were arranged around the vats and their apparatus.

"Tools that we can use," Ed said. "And materials that we can work. We've got to try to take some things along. To make weapons. Could we contrive Midas Touch pistols that we could hold?"

"Maybe," Prell answered. "I hope so. Take this, and that—and that over there. Hurry."

Creatures of vitaplast, with its complex combinations of silicon compounds paralleling the hydrocarbons, and its internal metabolism that could even involve transmutation and subatomic energy release, still could die under sufficiently violent conditions.

The three tiny androids scrambled to gather supplies and to equip themselves. Ed was awkward in the new conditions, where even the atmosphere tried to tear him away from any firm foothold. But he loaded himself down.

Before they were finished gathering all that they could use, the rattle and flare of Midas Touch weapons, turned low so as not to damage Mitchell Prell's various apparatus, but strong enough to destroy any clinging speck of synthetic life that Carter Loman might suspect the presence of, began behind them. Prell's experimental plant life withered slowly.

"Lead on!" Ed Dukas shouted.

And so, though hurricanes had begun for them, they crept across the glazed surface beneath the barrel of the little electron microscope and dropped into the air at its edge. It was like leaping from a cliff. But it was different, too. For if they had not been so heavily burdened, they might not even have fallen. Being such small objects, they had a greater exposed surface than large objects, in proportion to their bulk. This greater surface, like a sail presented to the wind,

offered a larger area for speeding molecules to hit; hence, without the equipment, they would have been as buoyant as dust particles.

Still lashed together by their joining strand of floss, the three fugitives drifted slowly down to the rear of the shelf.

"An inch more to go," Prell shouted, in grim humor. "A rather long one, I'm afraid."

Again they crept. Rough stone of the cupboardlike compartment rose around them, seemingly taller than buildings they had known. And it glowed reddish-violet. Fluorescence, it must be, from the scattered radiations of the Midas Touch weapons. Tediously the three crawled toward escape, as if through a night of fire and violence. Finally they reached a minute steel door in the corner of the cupboard, half hidden in the roughness of the stone.

They closed the door behind them and refastened its crude bolt. The space around them now was narrower—more in proportion to their own size. And there was a glow here—at least to their final eyesight. Perhaps there was a trace of radioactive ore in the rock causing the glow. The walls were as rough as a cave's.

"Just a chink in the stone," Barbara commented.

"Yes," Prell replied. "A crevice leading out to the face of the rock formation. Feel the draft of Martian night air? It would smother and freeze you if you were as you were born. But our flesh not only resists cold, it can create plenty of warmth within itself. We will be perfectly comfortable here, and safe—I think. Do you want to rest?"

"No," Barbara told him. "We don't really need that, either, do we? So let's begin what must be done. What are our plans, Ed?"

"We'll make a few things, if we can," Ed replied. "Then get to a spaceport somehow. I suppose that if we pick the right wind at the right time, it will blow us there—eh, Uncle Mitch? Then we'll do as you did—drift into a space liner and get a free ride back home to Earth. There—well, we'll see.

If we're very, very lucky, we might even get our old selves back."

Just then that recovery seemed to be his greatest, most desperate yearning, with many, many obstacles in its way. Even their personal recordings were in enemy hands now. Small though those cylinders were, they were far too huge for them to move or to think of recapturing.

"Where can we start to work?" Ed said to his uncle.

"Farther along the cleft," Prell told him. "I've already cached some supplies there. And there's a level space in a side cleft protected from these constant air currents."

Now they leaped upward and let the draft carry them. The muted quivers of destruction in the chambers from which they had just escaped, they left behind them. They arrived in the work area and got busy at once.

Near dawn they felt the quiverings of unusual sounds. So they followed air currents, betrayed by drifting particles of fluorescent dust, to a crack that showed starshot sky and the undulating desert. Thus they saw Carter Loman's caravan start back toward Port Karnak, with its booty of all that Mitchell Prell had made here: the fruit of a man's mind. But to Loman it was also the worst of the world's inventions. Loman was an android and also, obviously, a central figure, a personage of some importance, or he would not have been sent on this mission. But his mind remained that of a bigot.

Just then Ed Dukas found a savage pleasure in shaking one of the smallest fists ever to exist at the three retreating tractor vehicles. "Loman, Granger and the rest of you," he said, "there'll come a time. You've been fools. You were born too late."

The work went on for days—more tediously than Ed could have imagined, even with only hand tools to use. The same old metals seemed unbelievably hard at this size level—and coarse in texture—as if the atoms themselves had expanded. Barbara could scrub and scrub with a bit of abrasive mineral,

achieving only what seemed a poor excuse for a polish. Hammering did little good in shaping such metals, though Ed Dukas and Mitchell Prell were relatively so much stronger than they had been. Only cutting and pressure tools were effective, when aided by the softening heat of a forge—a tiny speck of nuclear incandescence maintained by a neutron stream and carefully screened, though vitaplasm, being actively or latently radioactive itself, was far less endangered by radiation than protoplasm.

But at last they produced three rough, cylindrical devices and their fittings.

Ed Dukas began to adjust to littleness. But to see boulders with their stratified layers of mica floating lazily through the thin air never lost its wonder. Crazy beauty was all around: strange, rich colors; keening musical notes—fine overtones of normal sounds. Sometimes, in the daylight, near cracks open to the outdoors, you saw living things seldom bigger than yourself: Martian life; little pincushions of deep, translucent purple veined with red and pronged with cilia of an indescribably warm hue. These were Martian microorganisms blown in by the breeze.

And once there was something else that Ed and Barbara both saw: something like the smallest of Earthly insects, but not that, either. A thing of steel-blue filaments and great eyes, and vibrating vanes as glossy as transparent plastic. Ed knew that he could shatter it with his hands. It rested in the sunshine for a moment; then it was gone.

"I suppose that there are star worlds as odd as this," Barbara commented.

She was strange herself—an elfin being that floated in the air, her form dimly aglow whenever there was shadow or darkness. To Ed, she was part of his vast separation from Earth. In accustoming himself to an environment where even the simple act of walking was a memory, it seemed that Earth dimmed away, easily yet frighteningly, like a dream, until Ed knew that, degree by degree, his mind was becom-

ing different than it had been, and he not quite the same person. And it seemed more so with Babs.

"Bacon and eggs for breakfast, Eddie," she teased once, lightly. "Walks under old trees beside a river. The Youth Center. Teachers I used to know. Yes, I remember. But the memory tries to get dim. And I want to hold on. Got to, because there are things to be done. But sometimes I wonder if I shouldn't regret the duty. I think of swimming in rain-drops or floating high over trees—being as whimsical as children and poets can imagine. We could do it! It's part of being super, isn't it? And I used to be scared of becoming an android!"

It was fun, and relief from grimness, to hear her talk like that. And now, too, he half agreed that being of synthetic substance was not so bad. Yet part of him still ached savagely for his old dimensions. And here in smallness he sometimes felt that she was changing so much that he was losing her—that she would let herself be blown away into the vastness, never to be seen again.

They ate a food-jelly, which Prell had prepared long ago for his sojourn here, and radioactive silicates. In it you could see the thready molecular chains and the beads of moisture between. Viscosity complicated etiquette. Everything tried to stick to you. You laughed and shook it off as best you could.

But even in fantastic moments grim facts didn't truly fade. Hard work helped sustain them. Murder and loss were too new. The danger on Earth was still too plain—perhaps poised on hours or weeks of time. Speed was the keynote.

Only once the three micro-beings peeped back into the lab that had belonged to Mitchell Prell, colossus. It was empty now, glowing with the taint of radiation left by the Midas Touch pistols. No one had troubled to neutralize it, as had surely been done with the removed equipment.

Mitchell Prell had built a radio, like one he had owned before. A flake of quartz dust, a few rough strands of metal,

an insignificant power supply. Simple, compact. Certain crystals were sensitive to radio waves. And at these tremendously reduced dimensions, they could convert tiny induced electric currents almost directly into fine sound waves that infinitely refined ears could hear.

So Ed Dukas heard the interplanetary newscast again: ". . . Android groups are still massing in large numbers to seek safety among their own kind and perhaps to carry out their own plans. There is a superficial calm. Fear of consequences so far seems to have kept both sides in check. We hope that it can hold."

Later there was a broadcast from Port Smitty: ". . . This information was withheld but has now been released. The mystery of Mitchell Prell's disappearance is believed solved after ten years. What is claimed to be his body—much damaged, since he and his confederates, one of whom is supposed to be a close relative, resisted capture and had to be shot down—was brought in to Port Smitty and is now en route to Earth, along with some mysterious equipment. The man who tracked Prell down is Carter Loman, a scientist in his own right, who has had a brief but brilliant career in Interworld Security. Detailed information is under seal, but Prell, a known advocate of 'improved mankind,' has been wanted for questioning and possible indictment for a long time. It has been suggested that his researches had gone further than most would dare to imagine."

Mitchell Prell, micro-being, chuckled. "The funny part," he remarked, "is that I never became a full-size android myself. My old carcass seemed good enough. Or I didn't get around to a change."

But Ed didn't smile at this. And he looked savage when one of Tom Granger's speeches was rebroadcast: "Prell ended? Can we believe it? There is an evil that could restore him in known ways. Now are there unknowns, too? Haven't we had enough? Some things from drunken visions are destroyed, but others come, to make our nights hideous. A

creature with a fifty-foot wingspread swoops down on a house, and people die. Are androids any different from what they create? But we are fortified, armed. If we must, we'll fight to the last."

No doubt there was truth behind the melodramatic oratory—at least as far as the horror was concerned. Barbara smiled sadly.

"He's earnest, I think," she offered. "So there's that much glory and courage in him, if there isn't any control. And you keep wondering, Is he half right?"

"I know," Ed answered with some contrition. "But I'd rather have what he considers a scientific hell than nothing. Well, we'll soon be en route back to Earth—unseen. Then maybe we'll find out and accomplish something. Lack of sense, like Granger's, or the muddled way in which laws are often interpreted now, will never work. That's one fact I'm sure of, even in a booby-trapped situation."

Ed was trying to be optimistic. In three weeks they had made equipment that they thought they could use. The three cylinders were Midas Touch pistols—neutron blast guns that could explode a few of the atoms of any solid or liquid that their beams touched. They also had a dozen grenades of the same principle and tubes to carry scant rations. There was a radio for each of the three—for reception, but also limitedly useful as transmitters. And there were knapsacks and clothing made from linden fiber pounded and divided as Prell had never bothered to do.

"We'll catch the first Earth-bound ship that we can," Prell said. "Queer, isn't it? If we could truly walk, going a mile would seem impossible. But the prevailing winds and a little jockeying will get us to Port Karnak. The tube train will take us to the space ships."

Prell had spoken too soon. Within that same hour, listening to the newscast, they learned: "For security reasons, interplanetary traffic has been indefinitely suspended."

Ed Dukas winced as if in pain. He and Barbara and Prell

looked at one another. In Ed's strange, small body, frustration and bitter anger fairly hummed.

"Security reasons." That could be a blanket excuse—minus explanations—for almost anything. Loman, knowing of something inimical and microscopic, and guessing at an intended journey from Mars, could well have had a hand in the suspension order. He was wary, and not sure that he had destroyed his hidden enemies.

The three stared down at the equipment that they had toiled so hard to produce. But Ed, like many another man before him who had been cornered, couldn't have quit even if he had willed it. Stubborn spunk, fear, need to regain losses, self-preservation and the awareness of the danger of millions of well-intentioned individuals, both android and human, all took part in the reason. And you could add the ancient and primal lust for revenge.

Ed crouched with the others on the rough floor of their chink in the rock. "Wait," he said at last. "Haven't small objects crossed space naturally—at least in hypothesis? Yes! Spores—living dust, their vital functions suspended. The old Arrhenius Theory of the propagation of life from world to world and solar system to solar system—throughout the universe. A spore, drifting high in an atmosphere, achieves escape velocity through molecular impacts and perhaps the pressure of solar light. It's driven into space, and onward. Uncle Mitch, couldn't the same thing happen to us far more readily, since we're not inert and we have minds to help direct our movements? Since we have beams of massive neutrons from the Midas Touch weapons? And aren't we more rugged than the first androids? Wouldn't we have a middling chance to endure raw space itself?"

Mitchell Prell eyed him quietly. Perhaps even his android cheeks blanched a trifle. "Something like that occurred to me once—a long time ago, Ed," he remarked at last, his voice very calm. "I didn't think it through. I guess it seemed

just too out of the ordinary even for me. And there wasn't any need to try it. Perhaps I was scared."

"There's need now," Ed said.

Barbara's expression was a study of eagerness and half fear. "Eddie, have you maybe discovered something?" she exclaimed. "Uncle Mitch, if there is any chance that it would work, I'm game to try it!"

After a moment the scientist nodded. "I believe that there's a good chance it will work," he said.

Before the next sunup they were ready. Clothed in garments of linden fiber, they looked like savages from fifty thousand years before. Yet their present condition could have belonged to no primitive era. They were united by a tough line of twisted strands, and their equipment was lashed to their backs. To human eyes they would have been as invisible as spirits. Were they to demonstrate, even unintentionally, android superiority in yet another field? Maybe, maybe not.

From the outlet of the crevice in the rock, they flung themselves into the atmosphere above the gray desert. Their great advantage at this stage was that, at the Martian dawn fringe, there were many updrafts, for the air, chilled fearfully at night, was already warming. At once they were sucked upward, as if by a vertical wind. Still, the first phase of their climb took many hours. They kept watching for upward-moving motes to guide them. Short, rocketlike bursts of heavy neutrons from their Midas Touch cylinders provided the reaction or kick to get them into the swiftest vertical currents.

Mars dropped far below, a dun plain marked here and there by the straight, artificial valleys or "canals." The relative vastness of a world to beings of pinpoint dimensions was nullified by the distance of altitude, until it looked no more extensive than it would have to the eyes that used to be theirs. Mars developed a visible curvature and a rim of haze, fired to redness by the rising sun. The sky above darkened from hard, deep blue toward the blackness of space, and the

stars sharpened. The sun blazed whitely, and the frosty wings of its corona began to show. The thinning atmosphere seemed to develop a definite surface far beneath the three voyagers.

They had spoken little in their ascent; but now the free movement of sound was smothered by the increasing vacuum, and there were only gestures and lip movements to convey meanings.

But there was not much that really needed to be said. The plan remained simple: get into trains of upward-jetting molecules, marked by small blurs or warpings of light. Absorb some of that upward surge into yourselves. How often had this same thing happened, without conscious design? Molecules move fast in a high vacuum. Molecular velocity was heat, wasn't it? But here it could not burn. For heat is chained to matter, and here there was just not enough matter to be hot.

Ed thought that they must be getting close to the Martian velocity of escape now. Only three-point-two miles per second. They might have attained it more simply by making greater use of their Midas Touch cylinders. There was scarcely any reactive thrust more efficient than that of neutrons hurled at almost the speed of light. But there was a pride in accomplishing it in a more difficult way. Besides, the energy supply for the weapons must be conserved.

But now Prell signaled with his hand, and they began to use the cylinders in earnest, shifting their course little by little from the vertical and in the direction of the sun. For it was time to curve inward—earthward. Swiftly now, there was no molecular distortion around them at all. Sense of motion faded out. Their high velocity was demonstrated only by the rapid shrinking of Mars behind them; unless, from sunward there came a minute, resisting thrust. Light pressure? But it would take a longer time in space than they meant to be to slow them down at all.

"We've done this much!" Ed said with his lips, but without a voice.

Barbara nodded and tried to smile, and he reached out and pressed her hand. Prell looked awed and bemused.

Ed tried then to read part of their fortunes in the reactions of his strange, minute body to the rigors of space. It was an atomic mechanism more than it was a chemical one. Therefore, it needed no breath. And the strong, radiant energy of the sun warmed it a little, so he did not feel cold. Hard ultraviolet light seemed not to harm it. There was only a sensation as of the shrinking of its hide—perhaps an adaptive reaction of its demoniac vitality—to protect the trace of moisture within it against the dryness of space. The fluid within vitaplast could be alcohol or liquid air—it was that adaptable. Prell had said this recently. Such fluids did not freeze easily. But they evaporated. So water remained the best body fluid in dry space. For in the full light of the sun, and with a nuclear metabolism, freezing was not a great danger.

Several days out from Mars the three contacted a small meteor swarm—maybe a fragment of a comet moving sunward and earthward. They moved with the swarm and landed on a chunk of whitish rock perhaps eight inches through at its largest diameter. But to them it was an airless world into which they could burrow, blocking the entrance to their shelter with chalky dust—a fortunate thing, for in the open the sun's glare and aridity of space were drying out even their android tissues and blurring their minds.

The meteor proved not quite lifeless, for on it clear crystalline needles crumbled and rose again. Call it silicon biology, proving that one could never know where something might thrive. In a fall into any atmosphere, such growth would surely be burned away without a trace.

Ed and Barbara and Prell learned to understand silent speech by watching lip movements. The need for hurry still beat in their minds, but drowsiness crept over them—perhaps another androidal adaptability was functioning here, related to the hibernation of animals in winter. It lessened loss of

vitality when conditions were not too favorable. But you could resist its compulsions if you applied your will.

The meteor moved on swiftly in the general direction of Earth. The journey would take weeks, and though Ed felt that never had there been a crossing of distance as eerily strange as this one, still the passage of time, and the events it held, was always with him and his companions.

There was a way for them still to experience real sounds, even here. The quartz-flake radio sets, pressed tight to their ears, transmitted vibrations through their own substance, when there was no air. They heard fragments of broadcasts coming from Earth. Pictures of what was happening there came to mind:

A score of monsters destroyed by hunting parties. A side issue, really. For in guard post and sketchily fortified line, man faced the hardier likeness that his knowledge had produced. When there were no clearly defined geographical boundaries to separate the poised forces, you never knew just where those lines would be.

But the scared, the pleading, the exhorting voices, faint in the distance, gave the mood, if not the clear view. Tom Granger was there, and others like him. The latest claim was that vitaplasm gave off poisonous radioactive radiations—not very true on Earth, where its vital energy remained mainly chemical.

Those with sense also tried to be heard. And there were other voices calling for the retreat to simplicity and the doing of work by hand. Such a pastoral of white clouds, green hills and sunshine could have its appeal. But how could its philosophy and inefficiency feed billions? Even if it were not just a bright vision seen before the last battle?

And in the midst of all this babble, there was another voice that was faint thunder: “. . . Got things of our own now, here in the woods! Even our own newscast station. Damn, we’ve taken enough! We Phonies won’t go back no further! Time to be stubborn—even if we all die for it and

never come back! They say folks would like to hang me—which shows how much wits they've got! Even if they got the chance, it wouldn't work!"

With a faint smile, Barbara's lips formed the name for her companions to read: "Abel Freeman . . ."

Ed nodded, watching his uncle's quizzical interest over an individual and a legend that he had only heard them tell about. And Ed had his own reactions, compounded of admiration, humor and icy mistrust that came close to hatred. Whatever else he was, Abel Freeman was also a figure of power.

Barbara's pixyish mouth—she was more than ever a pixy-shaped other words as they crouched at the entrance of a tiny cave that they had excavated into their meteor. Outside, the sunshine blazed.

"I've almost said it before, Ed," she remarked. "All these things happening on Earth are still important to me—never fear. But I'm a little too different now to quite belong to it. It gets like a dream—kind of remote."

Ed had been feeling this himself—almost with panic, because he was enough the person he had been to ache inside with the importance and tension of what happened at home. Yet somehow part of him was drifting away on its own special course.

"Hold on, Babs, a little longer," he urged.

They fell into torpid sleep after they had devised a mechanism to arouse them with an electric shock at an appointed time. It conserved their strength and allowed them to pass the long interval quickly.

Ed Dukas's slumber was not altogether dreamless. Like shadows, people moved in his mind. His parents. His old friend Les Payten, who perhaps had shown the white feather and had been lost to a small viewpoint. Schaeffer, one of the greatest scientists, barricaded in his underground lab in the City. And Harwell, the efficient but daring adventurer—another legend of his boyhood, who sometime was supposed

to command the first star ship. And perhaps most of all, there was that fantastic android bigot, Carter Loman, who aroused his black fury.

Perhaps Ed slept lighter than the others and awoke more quickly to the tingling prickle of electricity, because he had to run the show. The major burden of responsibility was his.

He shook his wife and his uncle awake and pointed to the blue-green bead that was the Earth, still several million miles away. Lashing their equipment to their shoulders and tying onto one another's waists like Alpine climbers, they leapt back into space one more, pushed by the neutron thrust of their Midas Touch cylinders. They had to make the rest of their trip apart from their meteor, which would not pass any nearer to Earth.

When the home planet was expanded by nearness to a great, mottled, fuzzy bubble, Ed tugged at the line for attention and spoke without sound in the stinging silence: "We've talked everything over before," he said. "So we know generally what to do—though only generally. We'd like to stick together. But there is just no way to do that and work fast—which may be a vital point. So we'll soon have to scatter. But we'll listen on our receivers. At least one of us should be able to find a way to communicate back. Failing that, we still know where to meet. Remember—the oak by my old house. The valley made by the trunk and the lowest branch."

Prell's brows knitted, his mind probably steeped in the swift, strange action to come. Barbara gave a soundless laugh.

"The crotch of an oak!" her lips commented. "What a trysting place! But it seems natural enough. Are we mad, or were we once just dull?"

Was her gaiety just bravado, or was she as cool as she seemed? Ed hoped that she was cool. Tugging at the linden line that joined them, Ed drew himself close to her.

"You don't have to speak, Eddie," she told him. "I know

what you're thinking. But why shouldn't I—and all of us—be all right?"

Her face had sobered. She looked strong. And so he was somewhat relieved. He kissed her. Perhaps it was odd that dust-mote beings still could do that.

VIII

ED AND BARBARA and Prell came to the parting of the ways sooner than they had intended. Without instruments, it was hard to judge velocity. They did not use their Midas Touch cylinders quite long enough to check speed sufficiently as they approached the great blue-green planet with its blurred ring. They hit the atmosphere, not really fast, but fast enough. Briefly, sound was reborn around them in a shrieking whistle, like a vast, thin wind. They tumbled over and over, and the strand that kept them together was broken. Tumultuous currents of the high ionosphere separated and scattered them as they plummeted lower.

Ed was unhurt. And did he hear—more in his imagination than his ears, here in the muffling semi-vacuum—a distant laugh and shout: "It's all right, Eddie . . ."? The impression faded away, like the voice of some gay sprite vanishing. He'd thought before of losing Barbara. Now they were two specks, separated from each other in the infinity of the terrestrial atmosphere. Even with the logic of plan and method, there was still some unbelief about how they would ever find each other again.

Using his radio, he tried to call. But there was no answer. The microscopic instrument could pick up messages from powerful stations millions of miles away. But for transmission, its range and that of those like it had to be ridiculously short: perhaps a score of yards—a fair distance in proportionate units.

Ed was drifting now, alone and high, as his wife and uncle

must be, too. Well, they'd meant this to happen soon anyway. So there was no real difference, was there? Get down to work quickly, down to the surface, where the high clouds seemed to lie flat on the gray Atlantic and on the near-by greenery of the continent. Ed's cylinder flamed, forcing him lower toward the City. His first chosen task was to find Carter Loman, a key enemy. Prell's objective was Tom Granger; then he would try to contact the androids, perhaps through Abel Freeman. And Barbara was to try to spike the trigger of violence by whatever means she could. That, in fact, was the greatest purpose of them all.

Downdrafts aided Ed's descent, while he listened to his quartz-chip radio. Was one who figured as prominently as Loman in the strained news of the day ever difficult to find? Ed did not anticipate too much trouble in locating him. Many people would know where Loman was and mention of the place would be frequent. Crowds would follow him everywhere.

As Ed watched a wolfish patrol of armed spacecraft, flying low on their atmospheric foils, the information came easily enough: ". . . Carter Loman's quarters at the Three Worlds Hotel are constantly under guard."

Ed was far more proficient now in getting around swiftly in the region of smallness. Erratically but effectively, using currents of air and the thrust of his Midas Touch blast, he descended toward a sky-piercing tower. He drifted into the doorway of the hotel's sumptuous lobby, marred now by the grim additions of radiation shields. For a few minutes Ed perched on the reception desk; he was less noticeable there than a fleck of cigarette ash.

There were constant inquiries for Loman, by telephone and in person, made mostly by newscast men. The clerks fended them off briskly. But soon there came whispered thunder, so low that it was almost audible to Ed as sound and not merely sensible as a heavy vibration: "More mail for Mr. Loman . . ."

The spark of Ed's propelling cylinder was almost too small to see as he jettied to the heavy bundle of letters and rode up with the attendant, past the guards, and slid with a skittering envelope through a mail slot, and into Carter Loman's presence.

He was sprawled on a bed and was clad in full vacuum armor of a type heavier than would have been necessary even on a dead world. It was pronged with special details as well: filaments, like parts of the insides of a Midas Touch weapon. Hovering over the vast shape, Ed felt the hard, stinging punch of a few scattered neutrons hitting his body before he ventured too close. Even though his own life was subatomic in principle, enough of those infinitesimal pellets could kill him. Loman had evidently grown wary and nervous, guessing with shrewd imagination what dangers he might now face. In addition to his massive costume, this android who hated his kind was wearing an aura of low-speed neutrons, constantly being projected from the filaments on his armor. Just then, the savagery inside Ed felt its bitter frustration. Loman even mistrusted the ban on space travel.

The enormous face beneath him, framed beyond the glaze of a helmet window, did not look at ease. Loman was muttering. He must have been at it, off and on, for a long time: "I wouldn't be surprised if you were around, Prell. Or even you, Dukas. I was right! I know all about your little self, Prell. It was all in your dead brain. You think you'll play a reverse David against Goliath, eh? If blasting out your lab didn't kill you . . ."

No, Ed Dukas was not so easily defeated. The aura of neutrons thrown out only by scattered filaments was probably not of continuous intensity. At certain points there might well be chinks in it, at which time he could slip to close quarters without having his own nuclear metabolism speeded up to the point of his destruction. But before he did anything final, he had to find out where Prell's stolen equipment was.

Ed felt the whirl of the air-filtering apparatus in the room and smiled. And there was a television globe nearby. Ed could have found ways, now, to make his own tiny voice audible to his enemy and to challenge him. But Ed decided against this for the present. He mustn't waste precious time, yet he suspected that he could depend on the restlessness of a nervous foe not to wait here quietly very long.

Again he was right. Perched on a ledge made by an irregularity of the wall, Ed waited less than five minutes before Carter Loman jumped up from the bed, cursed, and dashed from the room. Ed's Midas Touch cylinder reddened in his hand as he jetted after him. Of firmer flesh than other men, Loman hurried untiring, even in his massive armor and plastic helmet, down a back stairs, passing a hundred levels.

Then he was in a small, powerful car racing along a civic speedway that Ed remembered well. Clinging to plush that was like a dense forest under him, Ed remained undislodged by the tornadoes of air that came from speed.

Around him passed beauty that he used to know, expanded so enormously that much of the familiar mood of it was lost; and he himself seemed cut off from it, like a ghost coming back. But there was other, perhaps greater beauty, too—closer to the heart of what he was now. There'd been a controlled shower induced by the weather towers. Now the sun shone again, and the air sparkled, not with dust, but with countless tiny droplets of moisture—crystal globes, clear as lenses, but breaking the sunshine into brilliant prismatic hues.

Ed's brief rambling of mind ended when Loman did an odd thing. He stopped in Ed's old neighborhood, after having passed a half-dozen road blocks where uniformed men had entrenched themselves, covering their ugly vehicles with cut branches. Loman had only flashed his Interworld Security badge at each post, to receive respectful permission to go on.

Loman stopped his car abruptly before a house adjacent to Ed's own—one Ed knew well. But Ed had an odd feeling that this was not as strange as it seemed. This suburb, close

to the City, harbored many of the noted and notorious. Besides, many recent turbulent events had been centered within these few hundred square miles. And Loman had been in the neighborhood before, in the company of Police Chief Bronson. Also, had there always been something disturbingly familiar about Loman's manner?

Ed tingled at the unraveling of an enigma, as Loman hurried up the walk to the house. Loman found the door locked, but if this annoyed him, it stopped him not at all. An armored shoulder, backed up by the muscles of his kind—their power rarely demonstrated publicly—battered the door to splinters and Loman stepped through.

Ed followed him—as unobtrusive as part of the atmosphere—up a stairway and into a pleasant student room seen in colossal scale.

It was Les Payten's room which had thus been invaded without ceremony. Nor was the intruding colossus the least abashed that the giant Les, somewhat thinned down and pallid after his long convalescence from a visit to Abel Freeman, was present.

Ed saw his old friend's startled expression, then felt the vibration of his words: "Chummy, aren't you, bursting in like this? The police, eh? What have *I* done? My God, I've seen your picture! You're Loman!"

The other giant's smirk was half gentle, half bullishly humorous. "That's my name—if you prefer," he said. "I've had you watched, Lester Payten, for various reasons. You've been ill. Then why do you stay so close to what may become the battle lines? You're an odd guy, Lester. Too much fear, courage and conscience. Wanting to be a hero, but half a martyr. Recently one of the 'reasonable' kind. Soon there won't be any of those left. Not when a few more see those they love torn open, crisped or perhaps crushed by created things more hideous than *Tyrannosaurus Rex*. Such facts destroy the folly of thoughtfulness. And, good! For in that way the showdown comes against another kind of slime that

desecrates the form of man! You're a mixed-up kid, Lester—maybe even thinking of some old companions. But in your heart you know that you're all human. Me, I'm still sentimental, so I had to come to you at last. You ought to be safe among the asteroids, like your timid mother."

Being an audience to these comments, Ed's first puzzlement changed slowly toward comprehension of a weird truth. Drifting with the air molecules near the center of the room, he watched Les Payten sitting quietly at his desk, his look also showing that he was at the fringe of understanding. But maybe his mind half refused to plunge into the starkness of fact beyond. Too much had become possible. Sometimes it might be a land too strange for human wits.

Maybe primitive terror prompted Les to sudden violence. Or it was the sickening cynicism in Loman's words. In a flash of movement Les tried to get a weapon from his desk. Confronted by a human being, he might have succeeded. But Loman even dared, first, to shut off the neutronic aura around his armor, so as not to burn or kill the one he had come to see. Then quick fingers latched onto Les's wrists. Les fought with all his might but was pushed down on the floor. Dazed, he looked up at his conqueror.

"Yes, your memory-man father killed himself," Loman said. "But he could always return by recording, couldn't he? Before that, it was all arranged—with many who sympathized with the human cause. The mind probe showed that my expressed views were truthful. Interworld Security could use someone who was clever, unknown, and supremely active. Umhm-m—maybe I'm even harder than they hoped! Yes, I'm still an android, Les, because I have to be strong for battle. I hardly care who learns of it now, because the fight is sure to come. But I'll be a man again, when and if I can. And, like a man, I love my son. Things will become very difficult soon, Lester. So I want you with me."

Loman's heavy growl might have sounded paternal to common ears. But he capped it with a light tap to Les's jaw.

Les crumpled. For a moment this fantastic echo of his original sire, changed in face and form, stood over him, an armored demon by any standard.

The sun had set. From the twilight beyond the window came blue flashes, light heat lightning, off toward the wooded hills. They glinted on Loman's plastic face window, which had muffled his words scarcely at all. Loman seemed to match those flickers: science misused; wisdom, once reached for so carefully, fading; the collected armaments, improvised quickly by a master technology hidden in tunnel and on mountain-top, by both sides. And the guts of a star ship engine perverted. Once, on a lost Moon, a thing like that had exploded, just by error or chance. There had been no wild speeches to bring it about. Nor any panic. And there had been no Lomans to help in a more savage way.

Unless driving impulses were checked, the end could come this very night. Ed even wondered if he might waste valuable time sticking close to Loman any longer. Would it lead to more answers, as he had felt it must? Well, he still was sure of that, and Loman also seemed driven by haste. So Ed alighted on Les's shoulder and burrowed into the cloth. It was the safest thing to do. For whatever weapon might be used, it probably would not be directed at Les.

Loman picked up the unconscious form and dashed out to his car. There followed a wild ride along winding roads through the woods. Distantly, on a hilltop, Ed saw a metal framework slanting skyward. It held a cylinder whose neutron beam could level anything. But its power supply could mean complete destruction in a last resort to madness, for revenge—if someone lost control of himself, smashed the safety stops on controls, pushed levers a little beyond them.

There were wrecks on the road. Horror had been exchanged already, as refugees fled the City. Beside one broken car, half fused to a puddle of fire lay the body of a child, briefly glimpsed. And Ed detected a man's cries and protests, flung wildly at the sky from among the shadowy trees.

Or could it have come just as well from an android throat?

If it was Jones of common human clay or Smith, an android, could it make any difference? Yet it was an old thing—a reasonable man's anguish against wrong.

Still, was it hard to see a sequel, when something snapped in the brain? A kind of explosion. Then, before horror and rage, immortality or death could become equally meaningless. Good sense and kindness, once clung to desperately, could then become zero, and Earth, sky and humanity empty phantoms. Then could you picture the wronged one awaiting someone of the other kind? Could you picture him aiming his own weapon at another car and holding its trigger down until his own curses were lost in the roar of incandescence?

Ed Dukas rode on through the dusk in Loman's car, still clinging to the fabric at the shoulder of his inert friend, Les Payten. The sky still flickered—warning barrages, not yet aimed to kill. An aircraft swooped, its weapons shredding a high-flying horror that was not of metal. Some had been destroyed, but others always came—though they never had been truly numerous. A few other cars sped along the road—persons fleeing the dangerous congestion of the City.

Ed wondered if the steady *ping ping ping* in his quartz-chip radio was the ultra-sonic evidence of a spy beam in action, perhaps meant to trace Loman's course? At last the forces of law might do that to their own, if some of them disagreed with Loman's zeal or suspected that it had become too extreme. Chief Bronson, for one, had seemed a likable man. Besides, even after a mind probe, many would mistrust an android.

Ed reasoned that this must be a flight to a hide-out, which he had to see.

The car careened for a mile along a narrow side road, where, behind high banks, the pinging stopped. Had Loman counted on their shielding effect? Deeper in the woods, a block of undergrowth folded upward on a hinge, and the car rolled inside. Then the great trap door closed behind it.

Ed was not surprised even by so elaborate a retreat/as this. Now, with his neutronic aura cut off, Loman bore Les through a low doorway, into a great, low chamber fused out of bedrock. Could Loman and Mitchell Prell be as alike as this in their choice of secret places? Queer—and yet not so queer. Both were scientists. Prell had invaded the field of biology and Loman, in his original incarnation as Ronald Payten, had been a biologist from the start.

Ed might have attacked, now that Loman's aura was inactive. But it could be restored in an instant. Better to wait. A clearer chance might well come. His enemy might even be trying to lure any small, unseen intruder close to the coils of the aura.

Besides, in the soft artificial light, answers lay—answers that Ed had only dimly suspected, in spite of Loman's background. Since he had learned who Loman was, there hadn't been time enough for him to understand. But now the solution to a dreadful mystery came easily, because Ed could intrude here unseen.

There were vats here, too, vaster than any Ed had ever seen from any viewpoint and webbed with their attendant apparatus. Beneath the glossy surface of the fluid, like smooth oceans in the floor, various shapes were visible—all devilish but half transparent in their undeveloped state, their smooth plates of vitaplasm muscle and scale showing, but already alive and in slight, undulating motion. And no doubt these things were only in the embryonic state. They could grow much huger after being set free to hide and kill. Here, then, was the devil's brewpot of creation. Here the first slithering synthetic monsters must have been blueprinted and created. It was Ronald Payten's work—the product of his skill and his secret quirks. Madness in vitaplasm, to help build hate between android and man and bring the conflict to a climax.

And there was more. Against one wall was the plunder of Mitchell Prell's laboratory on Mars—or most of it. The tanks

were empty. But on a table stood the larger microscope, as if what could be seen through its eyepiece had been under examination. Perhaps the doll-like shape, the other vats, the machine shop and that tiny electron microscope were still there. And what lay at a still lower size level. Across such a void of distance, Ed Dukas could not see such detail. But he felt the mingling of hope and frustration. No path back to normal circumstances was here, yet. And the time was certainly not ripe—if it would ever come. Besides, did all of him really want to return, even if part of him fairly ached for it?

Carter Loman, or Ronald Payten, bent close to Les, his pronged helmet and wide face, beyond the curve of plastic and radiation shielding, like an ugly world in the sky. But if you had the mind to notice, perhaps Loman's expression was almost gentle just then. His voice came to Ed's senses as a subdued and modulated quake: "Lester! Wake up! I didn't hit you that hard."

Les seemed to have been lowered onto a couch of some kind. Perhaps he had already regained consciousness moments ago and had since been bent on quiet scrutiny of his surroundings, seeking out comprehension and the core of his own feelings. Ed could guess at some of this: an enigma revealed; Ronald Payten—creator of monsters; Les Payten's pseudo-father. Then, for Les, horror, shame, fury.

For Ed, the world seemed to rock as Les leaped. Les was not strong now and was still in his convalescence. And maybe he had been wavering and unsure, or even wrong in his past choices. But at this moment he was not at all in doubt, though the attack he made could have been pure, wild fright.

"Father, indeed! I'll kill you—*Phony!*" he screamed. Then he was grappling with Loman with all the strength that muscle and emotion could muster.

For that moment at least, he was Ed Dukas's ally, willing or otherwise. For he held Loman's attention diverted. And

because of Les's attack Loman's neutronic aura remained turned off.

Ed leaped and jetted, his tiny Midas Touch a scarcely visible spark as it flamed. He landed on the fabric near the back of Loman's neck and at the base of his helmet. Holding tight, Ed let his weapon flare again, this time using it to blast a tiny hole. He braved the violent spurt of energy from the dissolving rubberized fabric and then the moment of exposure to radiation and heat as he crept through. Now he floated in Loman's private atmosphere, within the great oxygen helmet, as Loman's struggle with Les went on.

Now was the time to test a plan: the speck-sized man against a being of human dimensions—comparatively as huge as a mountain. And it was android against android, advantage against advantage.

Loman's lungs, active now to give breath to a chuckle of triumph, breathed Ed in deeply. With his full equipment still lashed to his shoulders, he tumbled down through moist and faintly ruddy gloom. When the air currents quieted, he clung, a sharp splinter of obsidian rising and falling in his hand, as he cut through soft tissue.

Thus he reached a small artery and was borne along by the flow within it. It was a world of warm, buried rivers. Dim, rosy light sometimes found its way through the walls of flesh. Or was it, still the radioactive glow that Loman's body, adapting to the shortage of oxygen, had shown on Mars? But its physical structure, apart from its substance, remained human: the disklike red blood corpuscles pumped along in the gloom.

Only wait now to be circulated to the right position. Ed knew when he passed the great thumping valves and chambers of Loman's heart. But, no, this was not the place for action. He could feel himself rising now. Good! Was the darkness within the skull denser than elsewhere? Ed forced his way into constantly narrowing channels. Around him he still saw very dimly the living cells themselves. Here they

had long, interlocking filaments. They were the brain cells, beyond question.

He dared not use his Midas Touch here. The fluid at its very muzzle would have exploded. But he had grenades of much the same function. Set the fuse of one and leave it lodged here.

Before Ed was pumped back to the huge lungs, he felt the heavy concussion. Then came the wild gyrations of the colossus. A spark of atomic incandescence had exploded within its head, opening arteries to hemorrhage and destroying surrounding tissue with heat and radiation. A demoniac vitality of body might linger on, but a mind was dead. Had total death come quickly, all movement ceasing, Ed might have had to tunnel his way tediously from the gigantic corpse.

But his luck held out. He reached the lungs, and a great burst of air flung him forth into the oxygen helmet again.

Loman's form still twitched on the floor. One enemy was erased from the immediate future at least. Loman—or the pseudo Ronald Payten—had been removed as an active force of history, but the fury he had helped stir up was by now self-sustaining. Ed gave him a brief, almost rancorless thought. A woman had lost her husband in the Moonblast. And he was her memory re-created. She had had reason to hate science. And he had been warped and marked by her view. He was a bitter product of his times—impossible in the centuries that came before. Ed knew that he himself—as he was now, certainly—was also the child of his era. His uncle must always have been that. Babs—wherever she was now—was also of these years. And his dad, and countless others. Maybe, therein you had to find a tiny spark of tolerance for Loman, though not much. And would anyone ever want to bring him back to life, even if the world went on existing?

IX

Ed's score stood at two points gained—Loman out of the way and the source of the monsters revealed. But these were small victories compared with what must be gained if there was to be any hope. Masses of human beings and androids faced each other, their emotions inflamed to the point of final folly. And the end of one troublemaker and the revelation of his tools were small items beside all that.

Ed got out of Loman's oxygen helmet the way he had entered. Les Payten, a dazed Atlas, was stumbling around. Ed felt cut off from his old friend by a strange, great distance. But he could talk to him at least.

Ed floated to the radio in a corner of the workshop, found his way through a vent in its back, and touched a wire with the minute contact points of a crude microphone as large as his hand. The infinitesimal electric currents it bore were amplified and converted into sound. Ed's voice came forth loud and clear: "Les! It's me—Ed Dukas. I'm here, just as Prell came to me once. I'm an android just a few thousandths of an inch tall. I'm inside the radio, Les. First, I want to know how you feel about all this. Yes, I killed Loman."

There were world tremors of footsteps approaching with slow caution. A panel of the set was opened. The giant stared inside. Ed was now sufficiently accustomed to the vibrations of human speech to interpret the mood behind them.

There was a brief, hard chuckle, controlled and distant and unfriendly.

"Yes, Dukas, I'm quite sure it's as you say. It's odd, maybe, but I'm not surprised at all. In our time, you have to accept too much. Thanks for finishing Loman—not my father. Dad died on the lunar blowup, as you know, a victim of technology or history, as we all will probably soon be. I've told you before how I feel about everything. And what has hap-

pened to me tonight can scarcely have made my view of the androids any kinder. Once upon a time, in my callow youth, I thought I belonged to this crazy period. How wrong can you get? You take your strength and durability. I wonder what finer flavors of life you've lost. So there's my standard, and I'll live and die by it, Dukas. It's sad to lose a pal, but as you are, I guess you'll have to be an enemy. It's like an instinct, Dukas."

Les had spoken calmly and firmly. But Ed sensed the bitterness and uncertainty that lurked beneath the words.

"I won't argue, Les," he answered. "But when I'm thinking straight, the truth to me is still as it was. In championing man above android, or vice versa, you can only come to zero. Only in fair play between them is there a chance. So, if the urge ever comes over you, you might still do me a favor. Across this room is a microscope and attached equipment that are vital to me and to Barbara, who is like me, somewhere. Guard it, Les. No place that you could reach is perhaps truly safe for it. But I was thinking that if you could gamble again—as we all must—you might take it to Abel Freeman. I know that you were almost killed in his camp, Les. But I believe that the old reprobate is fundamentally sound and not as bitterly against such a device as some human beings might be. Thanks if you consider it, Les."

Still unseen by his one-time friend, Ed jettied to the vaulted ceiling and escaped through a ventilator pipe that emerged among concealing bushes. He rose above the trees, and a night wind pushed him on, while he listened to the quartz chip he carried. His first impulse now was to locate Tom Granger as his next candidate for silence.

It was not necessary. The news was on the air: "Granger was stricken in his quarters just before eight o'clock. The cause is not yet clear. He had just begun to write his new speech: 'I am frightened. We are all frightened. But this can change nothing of our purpose. In vitaplasm we are confronted by a vampirish fact: an identity of face masking a

difference of spirit. A treachery. A slow, dreadful encroachment. . . ."

Prell had gotten to Granger, then. If this was murder, maybe it was justified—if Earth was one per cent less in danger with one exhorter quieted, for a while if not forever. But what had been accomplished so far was small beside the threat that had been stirred up in many minds and machines across the countryside.

The sky was heavy with thickening clouds. Weather Control, working through its ionic towers had already been smashed. The night was alternately a Stygian hole or a glare-lit holocaust full of battering vibrations which might mean that real battle had already begun. So far, only neutron streams were being used. Where a mountain peak was hit there would be a blaze of light that even an android had better not look at. Then another mountain, looming over a different fortified line, would flare up and glow with moving lava. And the power that energized the weapons was the same as that which could reach the stars.

Rising high and jetting forward with his Midas Touch, Ed went to work. He thought of Abel Freeman's camp, which lay somewhere beyond the carpet of flaming woods which flanked one slope. But that was not his immediate destination now. He had dived for a power station house in a great trailer—and did it matter whether it belonged to the older race or the newer? He took great risks getting into its busy vitals. The constricting pressure of space warps, creating a gravity pressure of billions of tons to the square inch, eased gradually. A marble-sized bit of super-dense matter, crushed and compressed by the force and hidden by its opaqueness, began to expand to meter-wide size and to lose its blinding heat and fury as the processes within it stopped. Soon the power plant, turning out a flood of electricity out of all proportion to its small size, ceased to function. Scattered atoms of hydrogen and lithium became inert.

There was no easily visible cause for the breakdown, until

puzzled eyes found minute holes burned in vacuum tubes, allowing air to enter, oxidizing grids and filaments and stopping their action.

Two great weapons died, their energy cut off. But the power stations themselves were the far greater threat, for they harbored that sun-stuff within them. Now the controls of one, which some enraged person might contrive to push too far in spite of the watchfulness of others, were temporarily useless.

Working both sides of the line, Ed sabotaged another energy source, and another. Then he lost count, not because of a high score, but because heat and radiation had fogged his mind somewhat. Yet he kept at his labors because there was no other way. Within every square mile there was enough potential power to end his planet.

Around him, curses came vibrating from giants: "Men, eh? Jelly for insides! . . ." "Stinking Phonies—Hell-born or Prell-born! . . . Jim, I was wondering, this fizz-out looks fishy. Do you suppose the bastards *have* something?"

The front had quieted. It could be that, as far as he had gone, Ed had actually held the Earth together by spiking a few danger points. But he could take no pride for himself out of this. The job could go on and on, like a few buckets of water poured on a forest fire. It helped briefly, yet if there had been a thousand like him, but truly indestructible, the situation might still be without promise. The mass of the populace was too enormous and scattered; the natural suspicion and the forces which had stirred it up were too deep. The ghosts of Loman and Granger still walked in memory and maybe now in martyrdom. And the technology was still there. So Ed knew that, unless there was another way, he could only go on attempting to lessen a threat, until heat and radiation or its fulfillment zeroed him out.

It took him over an hour to stop one power station because his demoniac vitality was ebbing and because it had begun to rain heavily. The great drops could not kill him, but like fall-

ing lakes, they could hammer him into the mud, from which it might take days for him to extricate himself. He waited in the shelter of a loose bit of bark on the trunk of a tree. There he felt the helpless side of his smallness.

As he waited, his mind rambled. Had several groups of weapons quit without his noticing, or was this only something that he wished were so? Where was Barbara now? Would he ever see her again? . . . Now he lost himself in a fantasy. He saw them leaving Earth's atmosphere the way they had come—she and he together; maybe finding beauty and peace out there. Perhaps there were even tiny worlds—meteors—inhabited by crystalline things such as they had once seen but advanced to a state where they could think and build, and be friendly.

And, almost wistfully, he thought of another idyl—his father's, and even Granger's, among millions of others. He could almost see the crude charm of the houses, the gardens and the flocks. But how did one erect a wall against science—with science? It seemed harder to do than diking the water out of the deepest ocean and trying to live in the hole thus made.

The rain ended. Ed was air-borne again. He caused one more power station to break down. But there were others. And some that he had spiked might already be repaired. And from his quartz chip he heard other exhorting voices—not Granger's, but like Granger's. The old and human traits that Granger had represented could go on without him, fighting maturer thoughts as if in a drive toward suicide. Who could be everywhere, to quiet such clamoring?

In the darkness before dawn, Ed felt desperate and hopeless. His mind was on Abel Freeman again—the memory man, somebody's cockeyed family legend. It was an instinctive thing to seek out the strong for advice, for discussion and perhaps for a joining of forces.

Ed had only part of an energy cartridge left for his Midas Touch. But this was more than enough to jet him across the

mountains to the camp of the quaint android chieftain with whom he must now admit a kindship of flesh. Freeman was certainly a local leader now among those of the same mark who had fled from the City, where the population was predominantly of the old kind. Technicians, craftsmen, specialists of every sort, would be among Freeman's following.

Just as first daylight began, Ed drifted over the vast, hodge-podge encampment hidden in the woods and the marshes. Part of the ground it covered had been fused to hot, glassy consistency, perhaps by a small aerial bomb. Maybe a hundred Phonies had died there—which fact added nothing to the cause of peace.

Abel Freeman himself was not too hard to find, for he occupied a central, commanding position among various equipment housed in great trailers carefully concealed from any observer in an aircraft. But Abel Freeman, true to his legend, was sitting inside a rude shelter of boughs, which effectively concealed the light of his oil lamp. Before him was a sensipsych training device and a vast pile of books on many subjects, ranging from military tactics to atomics, on which he was obviously endeavoring to get caught up. He was savagely intent upon book learning, for which he had little aptitude. But Ed, seeing him in mountainous proportions, was perhaps better able than others to understand why androids in need of leadership flocked to his stamping grounds. Abel Freeman looked like the essence of rough and ready ability. Among android leaders, he was certainly the greatest.

Freeman had a small radio receiver beside him. Ed Dukas did not try to read the meaning of its blaring vibrations, for he was aware of their general tone. To him the instrument was chiefly a possible bridge of communication between himself and Freeman.

But Ed was not now given the chance to make such contact. For something else happened. From the pages of an opened book in Abel Freeman's hands coiled a thread of smoke, as charred words were written rapidly across the

paper. Ed was close enough in the air to read them, too: "*I am Mitchell Prell, who helped make your kind possible. I am one of you now—though undersize. Help keep the peace. Make no moves to start trouble.*"

Ed himself was startled. His uncle was here, then! They had arrived at almost the same time. And Prell had chosen a more dramatic means of communication—not ink, not an amplified voice, but the spiderweb-thin beam of his Midas Touch used as a long stylus, while he clung, perhaps, to a hair on the back of Freeman's hand!

For an instant, Abel Freeman was gripped by surprise. But then, with rattlesnake-swift movement, his own Midas Touch was in his hand. His whole self seemed to take on the smooth flow of perfect alertness which nothing but an utterly refined machine could have equaled.

"Prell or a liar?" he challenged. "Or Prell with a conscience—for his own first people and against his brain children? Yes, I've heard how little you might be now."

Ed had only glimpsed his uncle far off among the scattered motes of the air—another mote among them—a foot away he must be, at least. But Ed hadn't waited for contact. Instead he darted quickly inside Freeman's radio, touched the contacts of his microphone to the proper surface, and spoke: "Maybe you'll remember me, too, Freeman. I'm Dukas, Prell's nephew. You and I have talked before, man to man. Prell is no liar. And the conscience is there—for everybody, android or otherwise. Yes, I'm with him, the same size. And there's a problem, everybody's problem, the toughest one that I've ever heard of. So where do we get any answer that makes sense? Some of it has got to come quickly, I'm afraid, Freeman."

Amplified, Ed's voice had boomed out till it was like an earthquake to him. Once again a plastic box was opened above him and a gigantic face was overhead. In the tinkling overtones of smallness, there was almost a silence for a moment. Then came the rattle of Freeman's hard, amused laugh,

as he said, "I'll be damned! Smaller than snuff and made the cheap way. People. Something better. Yep, it must be so, even if I can't even see you. That puts us way ahead, I guess. And it ain't a whisky vision. Well, I guess it still don't make any difference. The old-time kind of folks hate us, and they'll never stop while both of us and them are alive. And us Phonies have been crowded all we can take. They've fired on us here, just barely trying to miss. Could be we've done the same to them. It's a mighty ticklish proposition. In winktime they could finish us all here, nice and clean and no grease left. So could we burn them quicker than gunpowder. So who gets trigger crazy and does it first? We've fixed them: an answer, under the ground. Maybe they can spoil our other weapons, like it seems they can, but not this one. It's buried deep enough. Let 'em try to hit us hard, and it'll set everything off. Your old Moonblast will be beat a thousand times. Us Phonies are bullheaded. We were made on Earth, same as them. It's ours as much as theirs. We came alive, and we can fade out again, young fellal!"

The vibrations of Freeman's tones rose and fell, with humor, fatalism and stubbornness. Two races, one born of the knowledge originated by the other, seemed to have driven each other into corners of no return. At some indefinite instant, the Big Zero would come.

Ed saw this garish picture more clearly than ever before. His strange little body fairly quivered with it. He looked at Mitchell Prell, who had come beside him now, where the pieces of apparatus that made up the interior of a small receiving set loomed, and he saw in his face the puzzled, tired fear of a scientist whose researches had always aimed at doing good. Just then Ed Dukas, micro-android, was far from separated from the Big Earth as he used to know it. So now, in desperation, he clutched at a vision which had once seemed almost a fact.

"Freeman," he said, "maybe men can't back down or co-operate with supermen. Doing that can seem like embracing

extinction. But hasn't there always been an obvious thing for *us* to do?"

"Umhm-m—you mean *we* should back down," Freeman replied softly. "Set out for the wide-open spaces that we were meant for. Leave the poor clodhoppers behind. Young fella, could be that you and me see things bigger. For others like us, it ought to be like that, only it ain't—yet. Most of the new people are butcher, baker and candlestick maker, Earth-born, and Earth-tied in their minds, like anybody. There's a ship, sure. But the stars are still awful far off, and never touched, and you can go addled just thinkin' about them. Lots of our sort would leave in their own sweet time, same as regular folks, sure. It's in their blood. You might say they got wings. But who really knows how to use 'em yet? And crowd our kinfolks off their home world? When they're spunky and sore like any human being? Nope. Sorry!"

Ed's faint hope faded before the old android's realism. For years the movement of migration had been farther and farther outward into space. It was at once a fact, a dream and a philosophy, like getting nearer to the Eternal Unknown. But most of the worth-while solar system was already owned by the original dominant species. Beyond was only the distance, not a beaten path at all, an untried and fear-some novelty. One star ship was about completed, yes. Fast it would be, but its speed would still fall far short of the velocity of light. So the nearer stars were decades, centuries, millenniums away.

An idea so familiar that it seems almost an accomplished fact can lose some of its charm in the hard glare of real obstacles. Ed felt something like a chill inside him. Though he knew the strangeness of a micro-cosmic viewpoint, others did not have this training and boldness for the unknown. He saw the majority of them balking fatally. But he still had to try *something*, to change as much of this as he could—if he could change any of it at all.

"I don't know whether or not to blame you and the others

for the revenge you say is rigged here and elsewhere, Freeman," he said. "I can see why both sides felt driven to do it. But I'm going to borrow your newscast facilities, Freeman. Or someone else's. Because rumor can be a powerful force. And I think I can give it a little push."

Mitchell Prell was still beside him. His grin was encouraging and sly. "Best of luck in what you intend, Eddie," he remarked. "Need a charge for your Midas Touch? . . . Meanwhile, I might try drawing the teeth of some dragons, as you seem to have been doing. Got to be careful, though, that both sides don't blame each other and get nervous. Granger, poor knothead, was easy. I hope that somehow circumstances will be right so that he can come back and learn. About Loman and the things he made, I can feel differently." "You heard?" Ed asked.

"It was on the air," Prell replied. "Somebody phoned the news in from near that lab. At least the overwise ones will know that they guessed wrong about which faction contrived a biological horror: a rabid old-race sympathizer, but an android, too! Can that make either side proud?"

A minute later Ed landed on the roof of the trailer which housed Freeman's wireless equipment. He crept past an immense drop of rain water that loomed like a rounded mesa beside him and entered a vent. Soon he touched the terminals of his microphone to the proper contacts. The transmitter was active. During the first pause between the tremors of other words and signals and coded information, Ed spoke quickly, half like a mischievous sprite. "This is no ghost voice. We hear that many androids want to take all of their kind beyond the solar system."

The station did not stop sending at once. Blame that on the startled monitor, who must have been listening. Ed took advantage of his opportunity. He was granted another moment to speak: "It is only natural that they should want to do that. Their kind of vigor matches the stars. They don't

need, or really want, the Earth. Their departure in peace could be a perfect answer to everything."

That much Ed got out before the transmitter clicked to silence. He knew he hadn't said anything original and that he had pushed an argument intensely, like a high-pressure salesman without full belief. What he had said was the way things should be, perhaps, but were not. Yet, again, like a romantic kid, had he felt the glamorous impact of his own words?

He was aware that androids would hear and millions of the old race—intent on communications from an enemy station—as well. A mysterious, informal voice was always a thing to draw attention, and his remarks had been rather startling. That they would be repeated and discussed a thousand times from other stations was probable. For they were like a chink of hope in one of two granite walls of obstinate righteousness and strength.

But Ed decided that he'd build no bright pictures of what his speech would accomplish but would wait for hard facts. He wished desperately that he'd had a moment more to speak on the transmitter, to call out Barbara's name.

Now he drifted again in a morning sunshine. Luck had held out this far at least. But over woods and crude shelters and hidden equipment and grimy grim-faced hordes that looked as human as refugees could, there were interruptions that denied optimism. A patrolling rocket ship sailed high; an intensified neutron beam turned a finger of air white hot behind it—very close. And mountaintops, already truncated and smoking, still would flare up dazzlingly. Android muscles and backs strained and bent to build fortifications as nothing merely human could. The toilers were both men and women. Could android children cry? Yes, some did.

Another thing happened. Ed, floating unseen low in the air, felt the buzz of shouts and cries. A man who seemed to be near collapse was being helped forward by a youth whose sidearms dangled near the knees of his torn dungarees.

At a little distance, where size seemed more as it used to be, Ed saw that the exhausted man was Les Payten. He was mud from head to foot; his face and arms were bloodied by brambles, his suit was a rag.

He was brought straight to Abel Freeman's shelter. There, supported by the armed youth, he spoke his piece: "I'm here again, Freeman, because a friend of mine asked me to bring you something for him. Does that make me a fool? I know it does. Because he's only my remembrance of a friend now. Damn you all!"

Les Payten fainted. A package wrapped in a plastic sheath fell from his hands, but Abel Freeman caught it. A couple of Abel's ornery sons looked on, exchanging puzzled scowls. Freeman warned them away with a clenched fist, knotty as an oaken club, and then shouted, "Nancyl Oh, Nancy-y-y!" But there was no time for Ed to observe Freeman's hellion daughter functioning as a nurse. He went inside Freeman's radio again, and spoke, "Freeman, this is Dukas. I came to you to give and receive help. That means that I've tried to guess right about you. I believe I have. When your neo-biologists examine what Payten has brought, they will be able to guess its value to me and mine. And I think that they will be able to combine its uses with those of their own equipment for something I'd like to see done. But there are other matters. Some of your power plants broke down, but so did others across the line. I did most of that. Prell must be doing more of it right now. What I said over your wireless was meant to gain a little time."

Ed paused. Freeman did not open the radio case again. Ed couldn't see him. He could only feel small thuds and clinkings—the android leader opening the package that Les Payten had brought. Ed wondered if he could ever imagine what was going on in Freeman's head, the thousand problems and feelings that must be seething there.

Freeman might be no good at book learning. And his roots were in a century when even a flying machine was a wild

thought. But he had to be shrewd to match the legend behind him. And he had to take tough situations with a light shrug for the same reason.

Finally Ed felt the rumble of his chuckle. "You mean I'm one of your 'reasonable' variety," he said. "Meantime you smash my stuff, eh, little bug in the air! I ought to get *damn* unreasonable! You might even finish me off! I'm kind of curious about that! But I don't think you have to bother. I know that the old-time folks are moving lots more hell machines up. And they're awful mad, because we got quite a few of them in one place last night—sort of by miscalculation. What's this talk about us androids matching the stars? Well, young fella, go 'head and talk some more. Yep, on our wireless rig. What's left to lose? And I'm still curious."

On the way to the radio trailer, Ed looked back to the ugly, humping shapes of weapons creeping up a high, blackened slope a few miles away. This was fresh action by men of the old kind who had lost friends or family and who saw no future in a demoniac succession. They were exposed, an easy target. But if they were destroyed, others would come. So they dared and defied, and the vicious spiral toward Big Zero continued to mount.

Ed tried to forget this for a moment. His first words by wireless were a call for his wife: "Babs, this is Ed, at Freeman's camp! Barbara, come to us if you can. At least, try to communicate with us. You know how. Barbara! . . ."

She had her own quartz chip, active all the time, so she must hear! And if she did, she could send a message just as he did, from some other station. But though Ed now had help, at Freeman's orders, no reply from his wife was sifted from the countless communications that were received.

But his previous attempt to spread a rumor had brought some expected results. The morning air was full of conflicting comments: ". . . A cruel joke . . . Psychological warfare . . . Perhaps, but what if the Phonies mean to leave?

Some already deny it. . . . Who spoke? Let him speak again."

Ed was glad to oblige, even revealing his name, his present dimensions and how a being of such size, equipped with a Midas Touch, might wreck a power station. He explained this last item because he did not want a misplaced blame to stir up more tension on both sides. Otherwise, he addressed himself mostly to the androids, aware that the old race would listen, too.

" . . . We were made on Earth, but not *for* Earth. We were meant to go much farther. Since we have so much, to be other than generous would be stupid. We have peace and the future, and most of what man ever hoped for, in our hands. That, or oblivion for everyone."

Though the ominous movement on the burned-out slope continued, the actual flash of weapons seemed suspended. The quiet was either promising or it was ominous.

He was lulled into enough confidence so that at noon he took a break. He went back to Freeman's shelter and into the tiniest workshop that Mitchell Prell had made and that Les Payten had rescued. He dropped from the air beside minute machines and the vats that had given Barbara and him their micro-android forms on Mars.

The whole piece—the greater microscope together with all the much lesser equipment—Abel Freeman had unwrapped hastily, so that entry into the twilight within the plastic cover had been easy. Freeman himself was not around.

For a moment Ed felt alone and wistful, clinging to the rough glass floor of the shop. But then he saw a faintly luminous elfin figure.

"Barbara!" he exclaimed.

Her laughter tinkled. "Think I wasn't come back, Eddie?" she teased. "That I couldn't share any interest in what happens to a big world?" Her blitheness almost angered him. Her expression sobered at once, and he saw that she looked

worn. "I know," she said. "It's not funny. We might have burned up with the Earth—far apart. But I kept busy. I tried to call you yesterday from a station in the City. But I wasn't sure I touched the proper contacts. And last night I had to be a good saboteur. I got three weapon-feeding power houses—though I guess that the fine equipment could be shielded against us easily enough. Later, I was lost—high up in the wind. With you along, it could have been wonderful. Of course, I heard news broadcasts. About Loman's lab. And from Freeman's station, a report of how Les arrived with a strange device. This morning I heard your call, but there was no way to answer. Eddie, Freeman's experts could copy us in normal size quite easily and quickly, couldn't they? And in better vitaplasm. The methods have been improved. Our personal recordings, perhaps lost, wouldn't be needed. Should we try to have it done? Then there'd be two of each of us, in different sizes. Two . . ."

Ed chuckled. "Not a word about returning to the old flesh, eh?" he said. "So have we learned? Android freedom to go anywhere, to be almost anything. Yep, magic almost. I think you'd rather perch on thistledown or a sunset cloud, or be pushed by light pressure, like sleeping spores, to a thousand light-years away! Well, it *could* still happen. Part of us has been changed enough by things like that to belong there. But the older part seems much like it was and belongs to the size plane that we first knew about."

They hugged each other and laughed. And they were reassured by the comparative calm around them. But the forces were still there, only awaiting someone's ultimate madness. And what can a world's end be like, coming in a split instant, to one's dissolving senses? Certainly it must be a quick, almost trivial experience.

Ed became aware of a bluish flicker. Then there was something like an awful thud; he could scarcely tell whether a crash of sound took part in it or not. Around him everything

was dazzling whiteness, without shadow or form. Then there was nothing.

X

CONSCIOUSNESS came back to him, bringing a cloudy surprise. Rough rocky walls were around him. This was an artificial cavern crowded with neo-biological equipment, most of which he could recognize. He lay firmly on a hard couch contrived of planks and a folded blanket, part of the latter covering him. A pair of dungarees and a mended shirt had been tossed casually across his bare torso.

Someone who looked like a young medico laughed near him.

"One week's time, Dukas—that's all we need now for a major transformation," he said. "You must have thought that we were all goners; it would have seemed like that to you. But it was just a freak attempt at sniping from the hills, with a Midas Touch focused to a thin beam. Whoever tried it must have been aiming at our chief's shelter. Only he wasn't there! Still down in miniature, you were caught in the backlash of the blast. But it only knocked you out and singed you a little. You kept holding onto some solid object. Your wife and the equipment were scarcely hurt at all. Then Prell showed up again. They talked with our chief the way you did before. They engineered the transformation. I thought you'd want to know all this quickly."

The youthful android looked good-humoredly awed. "They just stepped out," he added. "They'll be back in a minute."

Ed began to slide into his dungarees. He was grateful for his return to something like what he had been. His memories of an interlude when people were mountain tall were clear, yet they didn't seem quite to belong to himself.

He thought briefly of how he must have been brought back to normal size—his micro-form in one of the vats of

similar proportions acting as a pattern, electronic brain and all. In another vat, which Freeman's specialists had connected, the gelatins must have filmed and solidified slowly, taking shape, while in brain cells and filaments—different from electronic swirls but capable of assuming the same connecting arrangements—a personality was reproduced without destroying the pattern. With Barbara and Prell it had been the same.

"The world goes on, I see," Ed remarked.

The android biologist smiled wryly. "Some of that is your fault, Dukas," he said. "A matter of advertising. You made enough old-timers half believe that the Earth will go on being theirs. That cooled them off some. As for our kind, what you said started lots of them thinking again along what ought to be a natural track. Certainly the prompt departure of almost all of us is the only answer that can *really* solve anything. Yes, if that isn't far too large an order! Though I rather wish it *were* possible. . . . Here come Prell and your lady. I'll disappear."

They looked almost as they used to look—before anything about them was changed. Blame the loss of some trifling birthmark or scar here and there on the simplification of details that had occurred during a step down to smallness. Yet Mitchell Prell's china-blue eyes were as good-humored as ever and Barbara's smile as bright and warm.

"So here we are, Eddie," she said gaily. "And what we recently were are still around somewhere—alive and aware, and the same as we were, though not quite us any more. Separate, but still helping, I'm sure. And if we all get through all right, well, their universe is as wonderful and even vaster than ours."

Prell scowled for a moment, as if he envied his lesser likeness the continued chance to study the structure of matter, down where molecules themselves seemed bigger and nearer. But then his shoulders jerked almost angrily, as if to shake off the scientist's woolgathering. "Come on, Ed," he snapped.

"Abel Freeman has been pushing the idea you expressed, talking it around the world to all the androids. He says that, crazy though it is, he'll encourage it."

They emerged from the cavern into the afternoon sunshine of the camp. A sudden quiet had come over it. Eyes were staring up toward the east, while bodies tensed for a dive for whatever shelter was at hand. Something moved there with seeming slowness, though its gray hue, like a distant mountain peak, told that it was seen through all the murky heights of the atmosphere and was in free space beyond. Its motors were inactive. High sunshine brought metallic glints from its prow. It was certainly miles in length. Its presence could mean doomsday. But it *was* magnificent! If it could set human blood to coursing more swiftly, how must it affect an android?

"The star ship!" someone shouted. Others took up the cry: "The star ship . . . The star ship . . ."

Now Abel Freeman's voice boomed from a sound system: "Yep, you're right. I sent a call for it to come in from the asteroids. Figured it would be good for all our tough-gutted breed to look at! Uh-huh, tough gutted, I said, but might be I'll have to take that back. Anyhow, a man made for a mule loves a mule on sight. So how about men and a ship made for the stars? But might be you ain't that kind of folks—you only seem that way. Might be you can only see the mud on the ground and not the sky. I dunno. Moving all of us fast would take an awful lot of insides. But ain't she a beauty? I figure that the folks that brought her here didn't like to disobey orders, but they figured that letting us see was necessary. Maybe they're Phonies, too. I figure that Harwell, who bossed her construction, would be that now. Her kind of purpose demands it. But maybe you ain't up to what she's for. And you folks of the old kind, what do you say? What if we did leave you alone on Earth? What if you gave us this first star ship and let us build more, out on a moon of Saturn where you don't go much? Let's hear some answers!"

Obviously, Abel Freeman's words were also being broadcast. Meanwhile the star ship glided into the sunset. Someone spoke briefly from her by radio. Harwell?

"I hope you convince everybody, Freeman. I believe it does make sense. Not a cinch, though, even for us."

That, too, came out of the address system, as the ship headed back toward its base.

In his newer self, here on Earth, Ed breathed again, and his breathing was rapid. Once more the unseen future was a thrill. Yet he must not let glamour gild harsh uncertainties too much.

He looked at the faces around him. Some were stern, some grinned in bravado under Abel Freeman's challenging sarcasm, but in most of them there was a special, eager light, almost avid. It looked as if Freeman's talk and the great craft that had come with it were turning the trick. But these were trivial dramatics, too. The real source of success—if it was that—was in a basic kinship of android vigor with the stars. Awakened, it could relinquish the Earth without regret. These people could feel a little like lesser gods now. Their strength and endurance matched the next step of progress. Now the fantastic gulf of distance didn't seem as wide as Freeman had once thought.

From scattered android camps, messages came in, pointing generally toward deeper space. Yes, doubts were expressed.

"Shall we leave our homes without even an argument? Are we complete fools?"

"Yes, fools if we don't leave. We *can* make a mass departure. And remember that this is the *only* solution. Are they still too primitive for us to live with? The same fault might be ours. I wonder what they will say to our proposition?"

Communications also flashed back and forth among the old race:

"... They look like us but aren't. Their disguise and their powers hold a warning. No wonder so many of us think of them as something like medieval demons. Can we

trust what they say? Or is it a trick to disarm us? How can we know? Yet they intrigue us. Man has always sought to borrow strength and permanence from the rocks and hills. Are they that achievement? And we ourselves have wanted the stars."

Crouched over the small receiver in Freeman's restored shelter during that still-ominous afternoon, Ed and Barbara listened and waited. Around them they found both humor and pathos. In another shelter, dug into the rocks and soil, they located Les Payten, whose misfortunes with the Phonies had been many. His bitter frankness had won him dislike here. He had been put under restraint. There was the bearish tenderness and nursing of the gorgeous and powerful Nancy, Freeman's daughter, who stood beside him now, her big blue eyes expressing a mixture of soulful devotion and hunger about as rapacious as that of a starved hound-dog six inches from a fat rabbit. Les didn't seem to appreciate it at all. But he still tried to be a friend to his companions of a lost youth. "Babs! Ed!" he exclaimed at sight of them. "So you got back—to size, anyhow! But you could go back to where you began, as natural creatures! Damn, once we were young idiots, dazzled by a sense of wonder into too much tolerance. I don't want to be something synthetic! Can't you two realize the fundamental truth of that—for yourselves? Good Glory! Wake up!"

Ed's grin was one-sided. "For one thing, I suspect that going back all the way wouldn't quite work, Les," he said mildly. "We are what we are now, that's all. There's a cloudy sort of limit on switching bodies. There can never truly be two of anyone. Besides, we like being what we are. And should I remind you that, in common with all animals, man is a natural machine? As for being synthetic, I assure you that both love and poetry are there as well. So what do you imagine that we lack that the old timers always had? A taste for turkey or cake? Just lead us to it! We're human, Les—our forms and ideals and feelings are as they always were.

We're not devils. We're not truly separated from the old race in any part of sympathy. We're just people gone on—I hope!—a little further.”

Ed spoke gently, as he must to a tired, confused friend. Or was it to a whole, vast section of humanity, dumfounded by hurtling technology, proud and stubborn about what had seemed its eternal self, and dreading any change which could seem so darkly drastic?

Barbara tried, too. “Why don't *you* join *us*, Les?” she urged. “If you became like us, you would know! Besides, even if all the androids leave the Earth, the knowledge of how to mold vitaplasm won't be taken away with us. People here will continue to be destroyed in accidents, as has always happened. So that knowledge will be needed and used. Besides, some persons will change willingly. Some people may want to shut themselves away from such realities. But I don't think that they can. They'll have to learn to accept facts.”

Les Payten looked at his old companions oddly, as if tempted by an old soaring of the fancy. Then the light died in his eyes. “Nice logic,” he said coldly. “I could almost trust it if I didn't remind myself. A mechanical treachery. My Ed Dukas and Barbara Day are dead.”

His tone was calm, yet there was a quiver in it—perhaps of revulsion for these imponderable liknesses before him, whose hearts he thought he could not—or did not—want to see.

Ed was exasperated before a stubbornness of thought habit which was partly fear, though Les Payten was no coward. Some human minds were quick to adjust, taking even the radical newness of the last half century in their stride. But there had always been many others who were slow. Perhaps it was a childish taint, a resisting of maturity. And how could they keep pace now? But right there, Ed had to remind himself not to be too sure of himself. The next day or minute might trip him up.

There seemed no further way to argue with Les. Ed

could only express his sincere thanks for a favor, offer good wishes, and shrug lightly and in some mockery, for one who refused what seemed a simple truth. If that shrug was superficially unkind, perhaps it was also a goad in the right direction. A favor to a pal.

An hour later, when Ed told Freeman of Les Payten's reactions, the colorful android leader had a similar comment: "There's maybe billions like that—one reason why we got to leave. They'll change. But right now, who cares to take the ornery kid brothers fishing? Give 'em time to grow up a little more, first. It won't be so long. Just now we got our own problems and jobs. They ain't small, and nothing's certain. There's no hole to jump into that's as deep as deep space! I thought once that it couldn't happen. But now it looks as if we're gonna get the chance to try!"

Abel Freeman was right. That evening a message came from the World Capital: "Let us meet and confer with android representatives and earnestly apply ourselves to a binding solution."

That was the beginning. It seemed that reason had won out after all. Freeman and Prell were flown to the Capital. Ed did not go, for he foresaw a bleak conference with the single purpose of getting an arrangement made as soon as possible. This proved to be true. To the androids went the first star ship, its asteroid base, provisions to be delivered regularly over a ten-year period, supplies and equipment of all kinds, and the use of Titan, largest of distant Saturn's moons.

To the vast majority of the androids this was enough. To the few grumblers there would be scant choice. Let them view themselves as exiles, borne along by the eager mass of their kind.

When Freeman and Prell returned to camp after the signing of the treaty, Les Payten had already left for the City. For a while Nancy Freeman would look wistful. She was strong and beautiful, and perhaps not as wild as her

personal legend. Briefly, Mitchell Prell's eyes rested on her. Then he chuckled.

"Sirius," he said. "Nine light-years away. Not the nearest star, and not perfect. But the best bet of the nearest. Alpha Centauri is a binary, too. Bad for stable planetary orbits. But in the Sirian System, at least we know now that there *are* many planets. Come on, Freeman. There are more plans to straighten out."

Preparations began, and the weeks passed. Once Ed even went shopping with his wife—for the pretty things, symbols of the luxury and sophistication of Earth, that she wanted to take with her into the unknown. Was that the crassest kind of optimism before the harshness that could be imagined?

Ed, Barbara and Prell would be among the many thousands to be packed into the first star ship for the first long jump. They had earned the privilege of choice. Abel Freeman had elected to stay behind, to help direct operations on Titan.

Interplanetary craft were moving out in a steady stream, transporting migrants and the prefabricated parts needed to set up a vast glassed-in camp that few of the old blood could ever have tried to build. The androids might even have endured the cold poison of Titan's methane atmosphere without protection. But they had inherited, and could not easily throw off, earthly conceptions of comfort. And they had their rights. The countless things needed to build other star ships would soon begin to follow them.

The first group of interstellar migrants didn't have to go anywhere near Titan. The star ship came to Earth again, to orbit around it. Small rocket tenders were there to bring the passengers up to the boarding locks.

At the take-off platforms, Ed Dukas saw his parents for the last time. Jack Dukas, who had chosen to remain on Earth with his wife, shook Ed's hand warmly. Let them try their simple life of thatched stone houses on hillsides, Ed thought,

let them defy what seemed a too involved civilization. Perhaps after the android exodus, some few would even make it work—on Venus, if not at home.

Ed hugged his mother. They had memories. Now Ed stretched optimism considerably. "At last there can be a lot of time, Mom," he said. "Enough so that we might even see each other again, someplace. . . ."

Soon he and Barbara were up there in the great ship. To his touch, her arm was as smooth and soft as ever. Her hair was dark and thick, her eyes were bright with adventure, her skin a golden tan. And was it a loss that she could have bent crowbar with her bare hands, or have braved a vacuum at near absolute-zero temperature without harm?

"You're insulting me in your mind, Ed," she joshed gaily. "Not that I'm much bothered. So the robot stoops to conquer, eh? Of course we have no souls, Eddie."

"Certainly not!" he responded in the same manner. "All our hopes spring from human sources. Even our firmer flesh was a human dream. Yet you can practically hear our mechanical joints creak. The old race was created perfect. Who could ever dare to make it any better?"

Ed's sarcasm was honest. Yet he knew that before the unprobed distance, even the ruggedest of his kind were disposed to do a little whistling in the dark.

Around them in the ship's huge assembly room, there were shouts, greetings, jokes and laughter. A young couple chatted brightly. A child studied a toy with serious petulance. A man consulted a notebook. Perhaps few here yet realized their range, power and freedom or just what they faced. Their environment had been narrow, like all earthly history. No doubt many were afraid of the strangeness and time and distance ahead. They had reason to be. Out there in the black pit of the galaxy, even giant stars could perish.

Mitchell Prell had not yet come aboard. Abel Freeman had already left for Titan—without his willful daughter. Schaeffer, the scientist, had gone with him.

Under Harwell's commands, the colossal craft kept taking on migrants at top speed for thirty hours. They boarded in numbers out of all proportion to the available living space. Meanwhile there were needles to submit to. Vitaplast could be more rugged and adaptable now than when it was first used. The fluids from hollow needles were the means of imparting the improvements.

At last the ship quivered slightly. In contact with the heat of fusion of hydrogen and lithium to form the gaseous stellar ash called helium, any material rocket chamber would have been scattered instantly as incandescent vapor. But space warps stood firm in their place, squeezing with an atom-crushing pressure of their own, natural only at the centers of stars. And now there was no secondary arrangement for the conversion of such power as was released into electricity. Even the helium became pure radiation that emerged in a stream. It was a continuous, directed explosion of light, far stronger within its narrow limits than the outburst of a supernova. It had been known for centuries that light had both mass and pressure, and here it was concentrated matter—the ultimate in propulsive thrust—changed completely to energy. On the sullen Earth, neither man nor android dared watch that thin thread of fury, while slowly the ship began to accelerate toward a five-figure number of miles per second.

It was the start of the departure of fear from an ancient race. Or so it was meant to be. From Earth, curses no doubt followed the ship—and sighs of relief, and regrets, and good wishes. This setting forth should have been a human triumph. Many would insist that it was not that. Others knew that it was.

Braced in a cubicle two meters long, one wide and half a meter high, Ed Dukas held his wife's hand. Tiered rows of other cubicles were around them. Mitchell Prell had been with them minutes ago, and he had simply said, "Good night," half jokingly. Or was it more whistling in the dark?

"Just good night. That's how it'll be, sweet," Ed whis-

pered now. "The years won't mean anything. In the old mythology, the demigods could sleep for a millennium."

So the small spark of dread flickered out in them, as they invoked a power which they had used before, in smaller android bodies, and for a much shorter interval. No drug was needed. Their sleep became suspended animation.

Fine dust began to settle on them. But after forty years, measured by the ship's chronometers—on the basis of a retarded time imparted to objects moving at high velocity, a somewhat longer interval must have passed on Earth—Ed was awakened to help patrol the vessel.

With a few other silent men, he moved through its ghostly, dimly lighted corridors and compartments inhabited by the living dead. The stillness was all around, and outside only the stars burned in the void. The decades had been like the passing of a night of sleep; yet now awake, Ed was aware that the time had gone, building up an unimaginable distance. Here was the abyss. It was a cold awareness which made him neither confident nor happy. Sometimes he looked down at Barbara's quiet face, but he did not wish her to awaken now.

Ahead was Sirius, brighter than before. Beside it, visible at least to the unaided eye, was the dim speck of its companion star, a white dwarf, shrunken and old, little larger than the Earth, but incredibly massive, the very atoms at its core compressed by its fearsome gravity and the weight of material above them. This dwarf's internal substance, largely pure nuclear matter, would have weighed tons per cubic inch.

Instruments, brought nearer to a destination, now showed more clearly, by the irregularities in the movements of this binary system, the existence of planets pursuing changing paths in the complicated cross drags of two stellar bodies revolving around a common center. Those worlds, known of on Earth for a quarter century, were still out of telescopic view. Their seasons must be crazy—hot, cold, uncertain. Yet

other, nearer star systems had the same, and worse, drawbacks. And Sirius was relatively near, too. Besides, need an android worry about the fluctuations of mad climates so much?

After a month, Ed Dukas relinquished his duties to others who were aroused briefly. He slept again, for more decades, and on through the first contact with a Sirian world. His mind still slightly blurred, he came down in a tender from the orbiting star ship, after others had landed. Barbara was with him. Somewhere far ahead, among hills rapidly shedding their glacial coat under hot sunshine, was Mitchell Prell.

The sunshine came from Sirius itself, father away than the distance from Earth to Uranus; hence its size and brilliance were counteracted. Yet this world did not attend Sirius directly. It belonged to the white-hot speck at zenith—the dwarf with an almost equal attraction—tiny, but much closer. The planet hurried like a moon around this miniature sun.

Ed looked up at thin fish-scale clouds that were rose-tinted. Before him was a prairie covered with waving stalks bearing white plumes. Might you call them flowers blown by the wind?

High up among the melting ice he saw a tower and maybe a roadway. Later he beheld two shapes, brown and rough, with four tapered, flexible limbs radiating from a central lump. Man, with his arms and legs, also has vaguely the form of a cross. But these were different, though sometimes they almost walked, and metal devices glinted in the equipment they wore. Had he dreamed all this somewhere years ago? . . . Sometimes they rolled quickly like wheels, or they crept along, their limbs coiling. Once they flew, with bright flashes and without wings. But that was artificial. They moved off at last beside a shallow, salt-rimmed sea.

"We can't stay here, Eddie," Barbara stated. "It could be fascinating, but it would be worse than on Earth."

"As everyone will realize," Ed Dukas answered.

So the explorers came back to the tender. Nearer to the dwarf sun they found a world with a more stable orbit and less extremes of cold and heat. If it was nearer the dwarf with its almost negligible radiance, it also did not approach as close to Sirius, nor swing so far away. It was a chilly little planet that had once been inhabited, too; but now there were only shattered stone and glass and rusted steel. Much of it was desert. But there were forests here and there, and high glaciers..

High on a cliff-top in the thin, cold atmosphere, the refugees built their first city. It began with houses of rough logs and stone. But as time passed and the population increased, its metal-sheathed towers began to soar. In its glassed-in gardens, terrestrial flowers and trees thrived, while out of doors beautiful plants of a neo-biology easily surpassed in vigor the hardy local growths. There were theaters, stores and libraries. There was feminine fashion. Thus, nostalgically, an old earthly way was copied, though Earth was lost. There was no method to speak across the light-years. Earth might even belong to a somewhat different branch of time. But all this did not include the major point of separation. That was expressed in the way these people climbed the highest mountains without tiring and let the hoarfrost of fearsome cold gather on their bare faces without discomfort.

Sometimes, on blizzard nights, while they took the sleep that they did not need for more than the pleasure of it, Barbara and Ed would leave the windows open to the storm.

"Roofs, buildings—why do we even bother with them?" Ed would say jokingly.

His wife would look at him somewhat worriedly, as if he meant it. As if here there were a bitter strangeness that lowered all earthly art and charm and comfort and sense of home to a futility. But then she'd manage to laugh lightly, though often she didn't quite feel that way. "You know why we bother, Ed," she'd answer. "Because we want to stay

somewhat as we once were. Didn't you always agree to that? Because it's hard to change old habits and limitations, and grasp the freedom you're thinking about, Eddie. Sometimes I even suspect that we try to hide from that freedom."

Ed would scowl, feeling all of these thoughts, too. They had all the freedom that men had envisioned long ago: practical freedom from death, except from extreme violence; freedom from aging, freedom of mind, of action, of shape and size; the freedom of peace and plenty, and boundless energy. But beyond all this, like a goad, there often was, already, much more than a ghost of that ancient human restlessness that always had thrived on strength.

"Are you happy here, Babs?" Ed asked once when there had been time to doubt.

By then they already had two young sons, born of new flesh in an old way.

"Of course—reasonably," she chuckled. "Though I have my moods. Then I don't quite know . . . But, Eddie, this is the great, marvelous future, isn't it—the one we looked forward to with longing and wonder? We ought to appreciate it completely."

"It is that future. But now, sweetheart, it's also just the present."

There were incidents to match such restless talk and thinking. There was Mitchell Prell, always groping for new things, shouting down from a cragtop, or from his laboratory, "Hey, Ed! Barbara! Come here!"

Maybe he'd discovered a vein of ore that might be mined, or a strange specimen of hitherto unnoticed local fauna or flora. He remained a scientist, while Ed had become a mere builder of buildings.

More than likely, the woman Prell had married would be with him—she had been Nancy Freeman of a fantastic origin. That he had separated himself enough from his studies to take a wife was a minor miracle. That these so-different two should be together was certainly another. That she had

learned to be both tasteful and poised, though no less vigorous than ever, had perhaps been hoped for by the first romancing thought that had given her real being on Earth.

To live in peace, comfort and beauty, Ed now realized, was not a final goal. The wild nomad, like Prell, shouting down from mountaintops, always seeking the unknown and straining to be bigger than his powers—however great they might have become—still had to be served. Otherwise pride was insulted, the urge to learn and progress was defeated; boredom set in, and centuries of life were not worth living.

Besides, belatedly, after years, there were voices, speaking out of wireless equipment in a way that Ed and Barbara Dukas and Mitchell Prell had reason to remember. That this world was now haunted by beings that floated with the dust in the air was a fact which in itself had an eerie, nomadic charm. Three tiny beings. No, now there were four.

"Hello! Did you guess that we came with you on the star ship? . . . But we stayed on that first planet. Then we visited others. Once we slept under a glacier—we don't know how long. Now we have built another biological workshop. So we will not be lonely. There will be many of us. I see you have done well. What comes next?"

Ed had the odd and startling impression of having been spoken to by himself. But he and a tiny speck of the clay of the half-gods were entirely distinct, even if their names were the same. The vast difference in size, enforcing separate thought patterns to meet the problems of different environment, had widened the gap further.

"It's us!" Barbara said.

Mitchell Prell and Nancy were also present just then, in the Dukas house. Perhaps the visitors had waited for them to be there.

"I know who you mean," Nancy remarked. "Your little folk, Mitch. Tell them something. Or do they embarrass you by being so strange? Have you forgotten?"

Prell laughed somewhat unsteadily. Other interests had

long ago taken his attention away from the small regions that were within the reach of android powers.

"They're special friends," he said. "We won't have any trouble talking to them. Hello yourselves!"

So it was, for an hour. There was a mood of elfin charm, of expanded dimensions, of soft, rich colors; of physical laws wonderfully different in effect. The memory was haunting. But the larger Ed and Barbara had no present wish to return to that fantastic land. It was not their destiny.

"So long for now. . . ." The voices faded away playfully. But as Sirian time built Terran years, they were occasionally heard again, bearing a note of challenge.

The new city had grown huge. The surrounding country was becoming populous. And the inevitable happened, like part of a plan implanted in the nature of man from the beginning—to grow, to reach out, to be bigger in all things than he was before, though perhaps even to imagine the final goal itself was still beyond his intelligence and his experience. Now a more rugged body only made the drives stronger and the outcome more sure.

Still orbiting around this first colonial world, outside the old solar system and linked to the history of Earth, was the star ship, kept always in careful order. But on a small, jagged moon, a larger, better craft was under construction. It would have thrilled ancient blood; it could stir an android more.

Something sultry began to ache in Ed Dukas's mind at the thought of restraint.

"Some of us will have to go on, Babs," he said one dwarf-lit half-night. "Blame it on fundamental biological law—in me, and the boys, too. Call it building an empire too big for any government. Maybe it's an intended step—toward some other condition still out of sight. No doubt we're far from the end of what we can become. I don't know. I don't really care. I'm just a man and glad of it. I only know how I feel, and I suspect that, deep down, you feel the same!"

For a moment Barbara was angry and sad. She still had a

woman's wish for permanence. She knew that Ed was thinking of other stars and their systems—red giants, flickering variables, bursting novae—a whole universe of mystery beckoning to a new kind of human. Even the ugly coal-sack clouds of cosmic dust could have their appeal. She herself was not beyond being intrigued by such things.

She walked across her pleasant room, which had begun to bore her a little, as Ed knew. "I'm game," she said mildly.

Inconceivably far off were other galaxies. Maybe Ed read her mind a little, as she thought of the vast, tilted swirl of the one in Andromeda, almost as big as their native Milky Way. It was the nearest, but so distant that all the light-years they had crossed could seem a mile by comparison. As a child she used to look at a picture of it and think that everything she could imagine, and much more, was there: books, musical instruments, summer nights, dark horror.

Ed and she were like the pagan divinities dreamed up wistfully long ago. Yet now she felt very humble.

"Ed—"

"Yes?"

"I was just wondering where God lives," she said.

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