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a scientific experiment in which man is enabled to do without sleep with *frightening results*....

Prima Belladonna

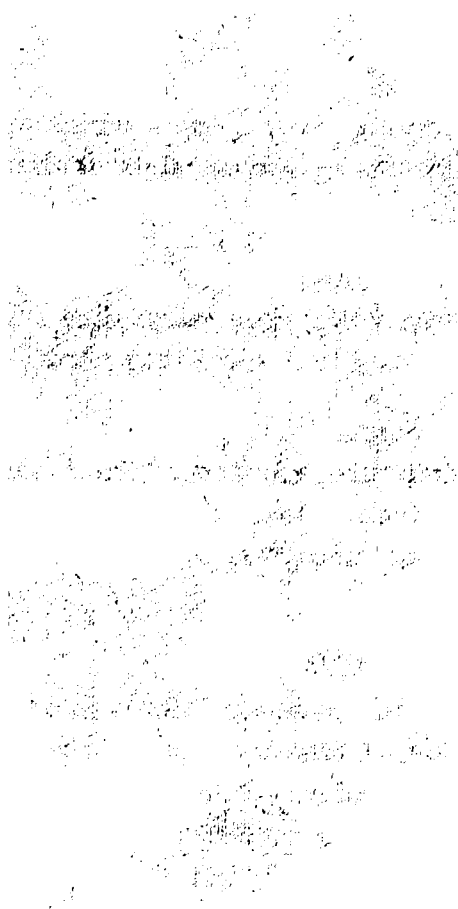
a girl's voice can cause extreme anguish (and joy) in a *living plant*. . . .

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in the future, extreme mental pressures will produce men who have not only doubles but *triples*. . . .

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**THE VOICES
OF TIME**
and Other Stories

J. G. BALLARD



A BERKLEY MEDALLION BOOK
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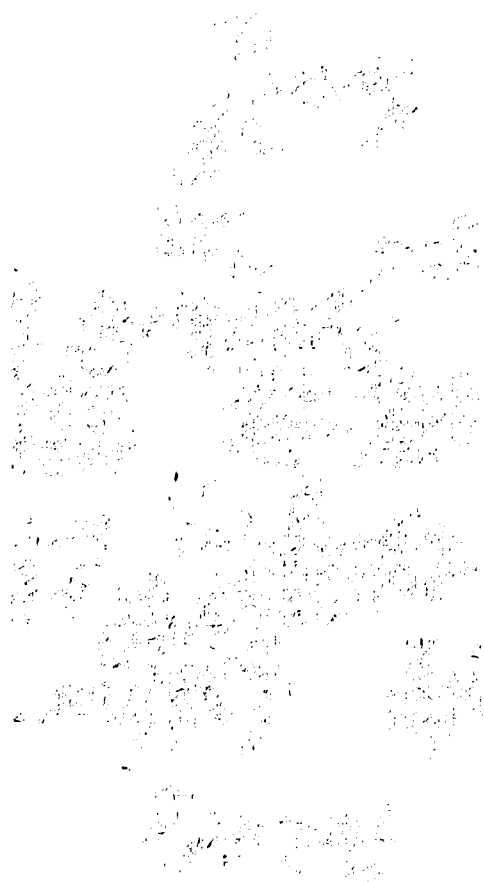
BERKLEY EDITION, FEBRUARY, 1962

BERKLEY MEDALLION BOOKS are published by
Berkley Publishing Corporation
101 Fifth Avenue, New York 3, New York

Printed in the United States of America

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THE VOICES OF TIME

ONE

Later Powers often thought of Whitby, and the strange grooves the biologist had cut, apparently at random, all over the floor of the empty swimming pool. An inch deep and twenty feet long, interlocking to form an elaborate ideogram like a Chinese character, they had taken him all summer to complete, and he had obviously thought about little else, working away tirelessly through the long desert afternoons. Powers had watched him from his office window at the far end of the Neurology wing, carefully marking out his pegs and string, carrying away the cement chips in a small canvas bucket. After Whitby's suicide no one had bothered about the grooves, but Powers often borrowed the supervisor's key and let himself into the disused pool, and would look down at the labyrinth of mouldering gulleys, half-filled with water leaking in from the chlorinator, an enigma now past any solution.

Initially, however, Powers was too preoccupied with completing his work at the Clinic and planning his own final withdrawal. After the first frantic weeks of panic he had manage to accept an uneasy compromise that allowed him to view his predicament with the detached fatalism he had previously reserved for his patients. Fortunately he was moving down the physical and mental gradients simultaneously—lethargy and inertia blunted his anxieties, a slackening metabolism made it necessary to concentrate to produce a connected thought-train. In fact, the lengthening intervals of dreamless sleep were almost restful. He found himself beginning to look forward to them, made no effort to wake earlier than was essential.

At first he had kept an alarm clock by his bed, tried to compress as much activity as he could into the narrowing hours of consciousness, sorting out his library, driving over to

Whitby's laboratory every morning to examine the latest batch of X-ray plates, every minute and hour rationed like the last drops of water in a canteen.

Anderson, fortunately, had unwittingly made him realize the pointlessness of this course.

After Powers had resigned from the Clinic he still continued to drive in once a week for his check-up, now little more than a formality. On what turned out to be the last occasion Anderson had perfunctorily taken his blood-count, noting Powers' slacker facial muscles, fading pupil reflexes, the unshaven cheeks.

He smiled sympathetically at Powers across the desk, wondering what to say to him. Once he had put on a show of encouragement with the more intelligent patients, even tried to provide some sort of explanation. But Powers was too difficult to reach—neurosurgeon extraordinary, a man always out on the periphery, only at ease working with unfamiliar materials. To himself he thought; *I'm sorry, Robert. What can I say—* "Even the sun is growing cooler—?" He watched Powers drum his fingers restlessly on the enamel desk top, his eyes glancing at the spinal level charts hung around the office. Despite his unkempt appearance—he had been wearing the same unironed shirt and dirty white sneakers a week ago—Powers looked composed and self-possessed, like a Conrad beachcomber more or less reconciled to his own weaknesses.

"What are you doing with yourself, Robert?" he asked. "Are you still going over to Whitby's lab?"

"As much as I can. It takes me half an hour to cross the lake, and I keep on sleeping through the alarm clock. I may leave my place and move in there permanently."

Anderson frowned. "Is there much point? As far as I could make out Whitby's work was pretty speculative—" He broke off, realizing the implied criticism of Powers' own disastrous work at the Clinic, but Powers seemed to ignore this, was examining the pattern of shadows on the ceiling. "Anyway, wouldn't it be better to stay where you are, among your own things, read through Toynbee and Spengler again?"

Powers laughed shortly. "That's the last thing I want to do. I want to *forget* Toynbee and Spengler, not try to remember them. In fact, Paul, I'd like to forget everything. I don't know whether I've got enough time, though. How much can you forget in three months?"

"Everything, I suppose, if you want to. But don't try to race the clock."

Powers nodded quietly, repeating this last remark to himself. Racing the clock was exactly what he had been doing. As he stood up and said goodbye to Anderson he suddenly de-

cided to throw away his alarm clock, escape from his futile obsession with time. To remind himself he unfastened his wrist-watch and scrambled the setting, then slipped it into his pocket. Making his way out to the car park he reflected on the freedom this simple act gave him. He would explore the lateral byways now, the side doors, as it were, in the corridors of time. Three months could be an eternity.

He picked his car out of the line and strolled over to it, shielding his eyes from the heavy sunlight beating down across the parabolic sweep of the lecture theatre roof. He was about to climb in when he saw that someone had traced with a finger across the dust caked over the windshield:

96,688,365,498,721

Looking over his shoulder, he recognized the white Packard parked next to him, peered inside and saw a lean-faced young man with blonde sun-bleached hair and a high cerebrotonic forehead watching him behind dark glasses. Sitting beside him at the wheel was a raven-haired girl whom he had often seen around the psychology department. She had intelligent but somehow rather oblique eyes, and Powers remembered that the younger doctors called her "the girl from Mars."

"Hello, Kaldren," Powers said to the young man. "Still following me around?"

Kaldren nodded. "Most of the time, Doctor." He sized Powers up shrewdly. "We haven't seen very much of you recently, as a matter of fact. Anderson said you'd resigned, and we noticed your laboratory was closed."

Powers shrugged. "I felt I needed a rest. As you'll understand, there's a good deal that needs re-thinking."

Kaldren frowned half-mockingly. "Sorry to hear that, Doctor. But don't let these temporary setbacks depress you." He noticed the girl watching Powers with interest. "Coma's a fan of yours. I gave her your papers from *American Journal of Psychiatry*, and she's read through the whole file."

The girl smiled pleasantly at Powers, for a moment dispelling the hostility between the two men. When Powers nodded to her she leaned across Kaldren and said: "Actually I've just finished Noguchi's autobiography—the great Japanese doctor who discovered the spirochaete. Somehow you remind me of him—there's so much of yourself in all the patients you worked on."

Powers smiled wanly at her, then his eyes turned and locked involuntarily on Kaldren's. They stared at each other sombrely for a moment, and a small tic in Kaldren's right cheek began to flicker irritatingly. He flexed his facial muscles, after a few seconds mastered it with an effort, obviously an-

noyed that Powers should have witnessed this brief embarrassment.

"How did the clinic go today?" Powers asked. "Have you had any more . . . headaches?"

Kaldren's mouth snapped shut; he looked suddenly irritable. "Whose care am I in, Doctor? Yours or Anderson's? Is that the sort of question you should be asking now?"

Powers gestured deprecatingly. "Perhaps not." He cleared his throat; the heat was ebbing the blood from his head and he felt tired and eager to get away from them. He turned toward his car, then realized that Kaldren would probably follow, either try to crowd him into the ditch or block the road and make Powers sit in his dust all the way back to the lake. Kaldren was capable of any madness.

"Well, I've got to go and collect something," he said, adding in a firmer voice: "Get in touch with me, though, if you can't reach Anderson."

He waved and walked off behind the line of cars. Reflected in the windows he could see Kaldren looking back and watching him closely.

He entered the Neurology wing and paused thankfully in the cool foyer, nodding to the two nurses and the armed guard at the reception desk. For some reason the terminals sleeping in the adjacent dormitory block attracted hordes of would-be sightseers, most of them cranks with some magical antinarcoma remedy, or merely the idly curious, but a good number of quite normal people, many of whom had traveled thousands of miles, impelled towards the clinic by some strange instinct, like animals migrating to a preview of their racial graveyards.

He walked along the corridor to the supervisor's office overlooking the recreation deck, borrowed the key and made his way out through the tennis courts and calisthenics rigs to the enclosed swimming pool at the far end. It had been disused for months, and only Powers' visits kept the lock free. Stepping through, he closed it behind him and walked past the peeling wooden stands to the deep end.

Putting a foot up on the diving board, he looked down at Whitby's ideogram. Damp leaves and bits of paper obscured it, but the outlines were just distinguishable. It covered almost the entire floor of the pool and at first glance appeared to represent a huge solar disc, with four radiating diamond-shaped arms, a crude Jungian mandala.

Wondering what had prompted Whitby to carve the device before his death, Powers noticed something moving through the debris in the centre of the disc. A black, horny-shelled animal about a foot long was nosing about in the slush, heav-

ing itself on tired legs. Its shell was articulated, and vaguely resembled an armadillo's. Reaching the edge of the disc, it stopped and hesitated, then slowly backed away into the centre again, apparently unwilling or unable to cross the narrow groove.

Powers looked around, then stepped into one of the changing booths and pulled a small wooden clothes locker off its rusty wall bracket. Carrying it under one arm, he climbed down the chromium ladder into the pool and walked carefully across the slithery floor towards the animal. As he approached it sidled away from him, but he trapped it easily, using the lid to lever it into the box.

The animal was heavy, at least the weight of a brick. Powers tapped its massive olive-black carapace with his knuckle, noting the triangular warty head jutting out below its rim like a turtle's, the thickened pads beneath the first digits of the pentadactyl forelimbs.

He watched the three-lidded eyes blinking at him anxiously from the bottom of the box.

"Expecting some really hot weather?" he murmured. "That lead umbrella you're carrying around should keep you cool."

He closed the lid, climbed out of the pool and made his way back to the supervisor's office, then carried the box out to his car.

"... Kaldren continues to reproach me (Powers wrote in his diary). For some reason he seems unwilling to accept his isolation, is elaborating a series of private rituals to replace the missing hours of sleep. Perhaps I should tell him of my own approaching zero, but he'd probably regard this as the final unbearable insult, that I should have in excess what he so desperately yearns for. God knows what might happen. Fortunately the nightmarish visions appear to have receded for the time being . . ."

Pushing the diary away, Powers leaned forwards across the desk and stared out through the window at the white floor of the lake bed stretching towards the hills along the horizon. Three miles away, on the far shore, he could see the circular bowl of the radio-telescope revolving slowly in the clear afternoon air, as Kaldren tirelessly trapped the sky, sluicing in millions of cubic parsecs of sterile ether, like the nomads who trapped the sea along the shores of the Persian Gulf.

Behind him the air-conditioner murmured quietly, cooling the pale blue walls half-hidden in the dim-light. Outside the air was bright and oppressive, the heat waves rippling up from the clumps of gold-tinted cacti below the Clinic, blurring the

sharp terraces of the twenty-storey Neurology block. There, in the silent dormitories behind the sealed shutters, the terminals slept their long dreamless sleep. There were now over 500 of them in the Clinic, the vanguard of a vast somnambulist army massing for its last march. Only five years had elapsed since the first narcoma syndrome had been recognised, but already huge government hospitals in the east were being readied for intakes in the thousands, as more and more cases came to light.

Powers felt suddenly tired, and glanced at his wrist, wondering how long he had till 8 o'clock, his bedtime for the next week or so. Already he missed the dusk, and he knew he would soon wake to his last dawn.

His watch was in his hip pocket. He remembered his decision not to use his timepieces, and sat back and stared at the bookshelves beside the desk. There were rows of green-covered AEC publications he had removed from Whitby's library, papers in which the biologist described his work out in the Pacific after the H-tests. Many of them Powers knew almost by heart; he had read them a hundred times in an effort to grasp Whitby's last conclusions. Toynbee would certainly be easier to forget.

His eyes dimmed momentarily, as the tall black wall in the rear of his mind cast its great shadow over his brain. He reached for the diary, thinking of the girl in Kaldren's car—Coma, he had called her, another of his insane jokes—and her reference to Noguchi. Actually the comparison should have been made with Whitby, not himself; the monsters in the lab were nothing more than fragmented mirrors of Whitby's mind, like the grotesque radio-shielded frog he had found that morning in the swimming pool.

Thinking of the girl Coma, and the heartening smile she had given him, he wrote:

Woke 6:33 A.M. Last session with Anderson. He made it plain he's seen enough of me, and from now on I'm better alone. To sleep 8:00? (These count-downs terrify me.)

He paused, then added:

Goodbye, Eniwetok.

He saw the girl again the next day at Whitby's laboratory. He had driven over after breakfast with the new specimen, eager to get it into a vivarium before it died. The only previous armoured mutant he had come across had nearly broken his neck. Speeding along the lake road a month or so earlier he had struck it with the off-side front wheel, expecting the small creature to flatten instantly. Instead its hard lead-packed shell had remained rigid, even though the organism within it had been pulped, and the impact had flung the car heavily into the ditch. He had gone back for the shell, later weighed it at the laboratory, found it contained over 600 grammes of lead.

Quite a number of plants and animals were building up heavy metals as radiological shields. In the hills behind the beach house a couple of old-time prospectors were renovating the derelict gold-panning equipment abandoned over eighty years ago. They had noticed the bright yellow tints of the cacti, run an analysis and found that the plants were assimilating gold in extractable quantities, although the soil concentrations were unworkable. Oak Ridge was at last paying a dividend!

Waking that morning just after 6:45—ten minutes later than the previous day (he had switched on the radio, heard one of the regular morning programmes as he climbed out of bed)—he had eaten a light unwanted breakfast, then spent an hour packing away some of the books in his library, crating them up and taping on address labels to his brother.

He reached Whitby's laboratory half an hour later. This was housed in a 100-foot wide geodesic dome built beside his chalet on the west shore of the lake about a mile from Kaldren's summer house. The chalet had been closed after Whitby's suicide, and many of the experimental plants and animals had died before Powers had managed to receive permission to use the laboratory.

As he turned into the driveway he saw the girl standing on the apex of the yellow-ribbed dome, her slim figure silhouetted against the sky. She waved to him, then began to step down across the glass polyhedrons and jumped nimbly into the driveway beside the car.

"Hello," she said, giving him a welcoming smile. "I came

over to see your zoo. Kaldren said you wouldn't let me in if he came so I made him stay behind."

She waited for Powers to say something while he searched for his keys, then volunteered: "If you like, I can wash your shirt."

Powers grinned at her, peered down ruefully at his dust-stained sleeves. "Not a bad idea. I thought I was beginning to look a little uncared-for." He unlocked the door, took Coma's arm. "I don't know why Kaldren told you that—he's welcome here any time he likes."

"What have you got in there?" Coma asked, pointing at the wooden box he was carrying as they walked between the gear-laden benches.

"A distant cousin of ours that I found. Interesting little chap. I'll introduce you in a moment."

Sliding partitions divided the dome into four chambers. Two of them were storerooms, filled with spare tanks, apparatus, cartons of animal food and test rigs. They crossed the third section, almost filled by a powerful X-ray projector, a giant 250-mega-amp G.E. Maxitron, angled onto a revolving table, concrete shielding blocks lying around ready for use like huge building bricks.

The fourth chamber contained Powers' zoo, the vivaria jammed together along the benches and in the sinks, with big coloured cardboard charts and memos pinned onto the ventilator hoods above them. A tangle of rubber tubing and power leads trailed across the floor from the tanks. As they walked past the lines of tanks dim forms shifted behind the frosted glass, and at the far end of the aisle there was a sudden scurrying in a large scale cage by Power's desk.

Putting the box down on his chair, he picked a packet of peanuts off the desk and went over to the cage. A small black-haired chimpanzee wearing a dented jet pilot's helmet swarmed deftly up the bars to him, chirped happily and then jumped down to a miniature control panel against the rear wall of the cage. Rapidly it flicked a series of buttons and toggles, and a succession of coloured lights lit up like a juke box and jangled out a two-second blast of music.

"Good boy," Powers said encouragingly, patting the chimp's back and shovelling the peanuts into its hands. "You're getting much too clever for that one, aren't you?"

The chimp tossed the peanuts into the back of its throat with the smooth easy motions of a conjuror, jabbering at Powers in a sing-song voice.

Coma laughed and took some of the nuts from Powers. "He's sweet. I think he's talking to you."

Powers nodded. "Quite right, he is. Actually he's got a

two-hundred word vocabulary, but his voice box scrambles it all up." He opened a small refrigerator by the desk, took out half a packet of sliced bread and passed a couple of pieces to the chimp. It picked an electric toaster off the floor and placed it in the middle of a low wobbling table in the centre of the cage, whipped the pieces into the slots. Powers pressed a tab on the switchboard beside the cage and the toaster began to crackle softly.

"He's one of the brightest we've had here, about as intelligent as a five-year-old child, though much more self-sufficient in a lot of ways." The two pieces of toast jumped out of their slots and the chimp caught them neatly, nonchalantly patting its helmet each time, then ambled off into a small ramshackle kennel and relaxed back with one arm out of a window, sliding the toast into its mouth.

"He built that house himself," Powers went on, switching off the toaster. "Not a bad effort, really." He pointed to a yellow polythene bucket by the front door of the kennel, from which a battered looking geranium protruded. "Tends that plant, cleans up the cage, pours out an endless stream of wisecracks. Pleasant fellow all around."

Coma was smiling broadly to herself. "Why the space helmet, though?"

Powers hesitated. "Oh, it—er—it's for his own protection. Sometimes he gets rather bad headaches. His predecessors all—" He broke off and turned away. "Let's have a look at some of the other inmates."

He moved down the line of tanks, beckoning Coma with him. "We'll start at the beginning." He lifted the glass lid off one of the tanks, and Coma peered down into a shallow bath of water, where a small round organism with slender tendrils was nestling in a rockery of shells and pebbles.

"Sea anemone. Or was. Simple coelenterate with an open-ended body cavity." He pointed down to a thickened ridge of tissue around the base. "It's sealed up the cavity, converted the channel into a rudimentary notochord. It's the first plant ever to develop a nervous system. Later the tendrils will knot themselves into a ganglion, but already they're sensitive to colour. Look." He borrowed the violet handkerchief in Coma's breast pocket and spread it across the tank. The tendrils flexed and stiffened and then began to weave slowly, as if they were trying to focus.

"The strange thing is that they're completely insensitive to white light. Normally the tendrils register shifting pressure gradients, like the tympanic diaphragms in your ears. Now it's almost as if they can *hear* primary colours. That suggests

it's re-adapting itself for a nonaquatic existence in a static world of violent colour contrasts."

Coma shook her head, puzzled. "Why, though?"

"Hold on a moment. Let me put you in the picture first." They moved along the bench to a series of drum-shaped cages made of wire mosquito netting. Above the first was a large white cardboard screen bearing a blown-up microphoto of a tall pagodalike chain, topped by the legend: "Drosophila: 15 rontgens/min."

Powers tapped a small perspex window in the drum. "Fruitfly. Its huge chromosomes make it a useful test vehicle." He bent down, pointed to a grey V-shaped honeycomb suspended from the roof. A few flies emerged from entrances, moving about busily. "Usually it's solitary, a nomadic scavenger. Now it forms itself into well-knit social groups, has begun to secrete a thin sweet lymph something like honey."

"What's this?" Coma asked, touching the screen.

"Diagram of a key gene in the operation." He traced a spray of arrows leading from a link in the chain. The arrows were labelled: "Lymph gland" and subdivided "sphincter muscles, epithelium, templates."

"It's rather like the perforated sheet music of a player piano," Powers commented, "or a computer punch tape. Knock out one link with an X-ray beam, lose a characteristic, change the score."

Coma was peering through the window of the next cage and pulling an unpleasant face. Over her shoulder Powers saw she was watching an enormous spiderlike insect, as big as a hand, its dark hairy legs as thick as fingers. The compound eyes had been built up so that they resembled giant rubies.

"He looks unfriendly," she said. "What's that sort of rope ladder he's spinning?" As she moved a finger to her mouth the spider came to life, retreated into the cage and began spewing out a complex skein of interlinked grey thread which it slung in long loops from the roof of the cage.

"A web," Powers told her. "Except that it consists of nervous tissue. The ladders form an external neural plexus, an inflatable brain as it were, that he can pump up to whatever size the situation calls for. A sensible arrangement, really, far better than our own."

Coma backed away. "Gruesome. I wouldn't like to go into his parlour."

"Oh, he's not as frightening as he looks. Those huge eyes staring at you are blind. Or, rather, their optical sensitivity has shifted down the band; the retinas will only register gamma radiation. Your wrist-watch has luminous hands. When you

moved it across the window he started thinking. World War IV should really bring him into his element."

They strolled back to Powers' desk. He put a coffee pan over a bunsen and pushed a chair across to Coma. Then he opened the box, lifted out the armoured frog and put it down on a sheet of blotting paper.

"Recognise him? Your old childhood friend, the common frog. He's built himself quite a solid little air raid shelter." He carried the animal across to a sink, turned on the tap and let the water play softly over its shell. Wiping his hands on his shirt, he came back to the desk.

Coma brushed her long hair off her forehead, watched him curiously.

"Well, what's the secret?"

Powers lit a cigarette. "There's no secret. Teratologists have been breeding monsters for years. Have you ever heard of the 'silent pair'?"

She shook her head.

Powers stared moodily at the cigarette for a moment, riding the kick the first one of the day always gave him. "The so-called 'silent pair' is one of modern genetics' oldest problems, the apparently baffling mystery of the two inactive genes which occur in a small percentage of all living organisms, and appear to have no intelligible role in their structure or development. For a long while now biologists have been trying to activate them, but the difficulty is partly in identifying the silent genes in the fertilised germ cells of parents known to contain them, and partly in focussing a narrow enough X-ray beam which will do no damage to the remainder of the chromosome. However, after about ten years' work Dr. Whitby successfully developed a whole-body irradiation technique based on his observation of radiobiological damage at Eniwetok."

Powers paused for a moment. "He had noticed that there appeared to be more biological damage after the tests—that is, a greater transport of energy—than could be accounted for by direct radiation. What was happening was that the protein lattices in the genes were building up energy in the way that any vibrating membrane accumulates energy when it resonates—you remember the analogy of the bridge collapsing under the soldiers marching in step—and it occurred to him that if he could first identify the critical resonance frequency of the lattices in any particular silent gene he could then radiate the entire living organism, and not simply its germ cells, with a low field that would act selectively on the silent gene and cause no damage to the remainder of the chromosomes, whose lattices would resonate critically only at other specific frequencies."

Powers gestured around the laboratory with his cigarette.

"You see some of the fruits of this 'resonance transfer' technique around you."

Coma nodded. "They've had their silent genes activated?"

"Yes, all of them. These are only a few of the thousands of specimens who have passed through here, and as you've seen, the results are pretty dramatic."

He reached up and pulled across a section of the sun curtain. They were sitting just under the lip of the dome, and the mounting sunlight had begun to irritate him.

In the comparative darkness Coma noticed a stroboscope winking slowly in one of the tanks at the end of the bench behind her. She stood up and went over to it, examining a tall sun-flower with a thickened stem and greatly enlarged receptacle. Packed around the flower, so that only its head protruded, was a chimney of grey-white stones, neatly cemented together and labelled:

Cretaceous Chalk: 60,000,000 years

Beside it on the bench were three other chimneys, these labelled "Devonian Sandstone: 290,000,000 years," "Asphalt: 20 years," Polyvinylchloride: 6 months."

"Can you see those moist white discs on the sepals?" Powers pointed out. "In some way they regulate the plant's metabolism. It literally *sees* time. The older the surrounding environment, the more sluggish its metabolism. With the asphalt chimney it will complete its annual cycle in a week, with the PVC one in a couple of hours."

"Sees time," Coma repeated, wonderingly. She looked up at Powers, chewing her lower lip reflectively. "It's fantastic. Are these the creatures of the future, Doctor?"

"I don't know," Powers admitted. "But if they are their world must be a monstrous surrealist one."

t h r e e

He went back to the desk, pulled two cups from a drawer and poured out the coffee, switching off the bunsen. "Some people have speculated that organisms possessing the silent pair of genes are the forerunners of a massive move up the evolutionary slope, that the silent genes are a sort of code, a divine message that we inferior organisms are carrying for our more highly developed descendants. It may well be true—perhaps we've broken the code too soon."

"Why do you say that?"

"Well, as Whitby's death indicates, the experiments in this laboratory have all come to a rather unhappy conclusion. Without exception the organisms we've irradiated have entered a final phase of totally disorganised growth, producing dozens of specialised sensory organs whose function we can't even guess. The results are catastrophic—the anemone will literally explode, the *Drosophila* cannibalise themselves, and so on. Whether the future implicit in these plants and animals is ever intended to take place, or whether we're merely extrapolating—I don't know. Sometimes I think, though, that the new sensory organs developed are parodies of their real intentions. The specimens you've seen today are all in an early stage of their secondary growth cycles. Later on they begin to look distinctly bizarre."

Coma nodded. "A zoo isn't complete without its keeper," she commented. "What about Man?"

Powers shrugged. "About one in every 100,000—the usual average—contain the silent pair. You might have them—or I. No one has volunteered yet to undergo whole-body irradiation. Apart from the fact that it would be classified as suicide, if the experiments here are any guide the experience would be savage and violent."

He sipped at the thin coffee, feeling tired and somehow bored. Recapitulating the laboratory's work had exhausted him.

The girl leaned forward. "You look awfully pale," she said solicitously. "Don't you sleep well?"

Powers managed a brief smile. "Too well," he admitted. "It's no longer a problem with me."

"I wish I could say that about Kaldren. I don't think he sleeps anywhere near enough. I hear him pacing around all night." She added: "Still, I suppose it's better than being a terminal. Tell me, Doctor, wouldn't it be worth trying this radiation technique on the sleepers at the Clinic? It might wake them up before the end. A few of them must possess the silent genes."

"They *all* do," Powers told her. "The two phenomena are very closely linked, as a matter of fact." He stopped, fatigue dulling his brain, and wondered whether to ask the girl to leave. Then he climbed off the desk and reached behind it, picked up a tape recorder.

Switching it on, he zeroed the tape and adjusted the speaker volume.

"Whitby and I often talked this over. Towards the end I took it all down. He was a great biologist, so let's hear it in his own words. It's absolutely the heart of the matter."

He flipped the table on, adding: "I've played it over to myself a thousand times, so I'm afraid the quality is poor."

An older man's voice, sharp and slightly irritable, sounded out above a low buzz of distortion, but Coma could hear it clearly.

WHITBY: . . . for heaven's sake, Robert, look at those **FAO** statistics. Despite an annual increase of five per cent in acreage sown over the past fifteen years, world wheat crops have continued to decline by a factor of about two per cent. The same story repeats itself ad nauseam. Cereals and root crops, dairy yields, ruminant fertility—are all down. Couple these with a mass of parallel symptoms, anything you care to pick from altered migratory routes to longer hibernation periods, and the over-all pattern is incontrovertible.

POWERS: Population figures for Europe and North America show no decline, though.

WHITBY: Of course not, as I keep pointing out. It will take a century for such a fractional drop in fertility to have any effect in areas where extensive birth control provides an artificial reservoir. One must look at the countries of the Far East, and particularly at those where infant mortality has remained at a steady level. The population of Sumatra, for example, has declined by over fifteen per cent in the last twenty years. A fabulous decline! Do you realise that only two or three decades ago the Neo-Malthusians were talking about a 'world population explosion?' In fact, it's an implosion. Another factor is—

Here the tape had been cut and edited, and Whitby's voice, less querulous this time, picked up again.

. . . just as a matter of interest, tell me something: how long do you sleep each night?

POWERS: I don't know exactly; about eight hours, I suppose.

WHITBY: The proverbial eight hours. Ask anyone and they say automatically 'eight hours.' As a matter of fact you sleep about ten and a half hours, like the majority of people. I've timed you on a number of occasions. I myself sleep eleven. Yet thirty years ago people did indeed sleep eight hours, and a century before that they slept six or seven.

In Vasari's 'Lives' one reads of Michelangelo sleeping for only four or five hours, painting all day at the age of eighty and then working through the night over his anatomy table with a candle strapped to his forehead. Now he's regarded as a prodigy, but it was unremarkable then. How do you think the ancients, from Plato to Shakespeare, Aristotle to Aquinas, were able to cram so much work into their lives? Simply because they had an extra six or seven hours every day. Of course, a second disadvantage under which we labour is a lowered basal metabolic rate—another factor no one will explain.

POWERS: I suppose you could take the view that the lengthened sleep interval is a compensation device, a sort of mass neurotic attempt to escape from the terrifying pressures of urban life in the late twentieth century.

WHITBY: You could, but you'd be wrong. It's simply a matter of biochemistry. The ribonucleic acid templates which unravel the protein chains in all living organisms are wearing out, the dies enscribing the protoplasmic signature have become blunted. After all, they've been running now for over a thousand million years. It's time to re-tool. Just as an individual organism's life span is finite, or the life of a yeast colony or a given species, so the life of an entire biological kingdom is of fixed duration. It's always been assumed that the evolutionary slope reaches forever upwards, but in fact the peak has already been reached, and the pathway now leads downwards to the common biological grave. It's a despairing and at present unacceptable vision of the future, but it's the only one. Five thousand centuries from now our descendants, instead of being multi-brained star-men, will probably be naked prognathus idiots with hair on their foreheads, grunting their way through the remains of this Clinic like Neolithic men caught in a macabre inversion of time. Believe me, I pity them, as I pity myself. My total failure, my absolute lack of any moral or biological right to existence, is implicit in every cell of my body . . .

The tape ended, the spool ran free and stopped. Powers closed the machine, then massaged his face. Coma sat quietly, watching him and listening to the chimp playing with a box of puzzle dice.

"As far as Whitby could tell," Powers said, "the silent genes represent a last desperate effort of the biological kingdom to keep its head above the rising waters. Its total life period is determined by the amount of radiation emitted by the

sun, and once this reaches a certain point the sure-death line has been passed and extinction is inevitable. To compensate for this, alarms have been built in which alter the form of the organism and adapt it to living in a hotter radiological climate. Soft-skinned organisms develop hard shells, these contain heavy metals as radiation screens. New organs of perception are developed too. According to Whitby, though, it's all wasted effort in the long run—but sometimes I wonder."

He smiled at Coma and shrugged. "Well, let's talk about something else. How long have you known Kaldren?"

"About three weeks. Feels like ten thousand years."

"How do you find him now? We've been rather out of touch lately."

Coma grinned. "I don't seem to see very much of him either. He makes me sleep all the time. Kaldren has many strange talents, but he lives just for himself. You mean a lot to him, Doctor. In fact, you're my one serious rival."

"I thought he couldn't stand the sight of me."

"Oh, that's just a sort of surface symptom. He really thinks of you continuously. That's why we spend all our time following you around." She eyed Powers shrewdly. "I think he feels guilty about something."

"Guilty?" Powers exclaimed. "*He* does? I thought I was supposed to be the guilty one."

"Why?" she pressed. She hesitated, then said: "You carried out some experimental surgical technique on him, didn't you?"

"Yes," Powers admitted. "It wasn't altogether a success, like so much of what I seem to be involved with. If Kaldren feels guilty, I suppose it's because he feels he must take some of the responsibility."

He looked down at the girl, her intelligent eyes watching him closely. "For one or two reasons it may be necessary for you to know. You said Kaldren paced around all night and didn't get enough sleep. Actually he doesn't get any sleep at all."

The girl nodded. "You . . ." She made a snapping gesture with fingers.

". . . narcotomised him," Powers completed. "Surgically speaking, it was a great success. One might well share a Nobel for it. Normally the hypothalamus regulates the period of sleep, raising the threshold of consciousness in order to relax the venous capillaries in the brain and drain them of accumulating toxins. However, by sealing off some of the control loops the subject is unable to receive the sleep cue, and the capillaries drain while he remains conscious. All he feels is a temporary lethargy, but this passes within three or four hours.

Physically speaking, Kaldren has had another twenty years added to his life. But the psyche seems to need sleep for its own private reasons, and consequently Kaldren has periodic storms that tear him apart. The whole thing was a tragic blunder."

Coma frowned pensively. "I guessed as much. Your papers in the neurosurgery journals referred to the patient as K. A touch of pure Kafka that came all too true."

"I may leave here for good, Coma," Powers said. "Make sure that Kaldren goes to his clinics. Some of the deep scar tissue will need to be cleaned away."

"I'll try. Sometimes I feel I'm just another of his insane terminal documents."

"What are those?"

"Haven't you heard? Kaldren's collection of final statements about homo sapiens. The complete works of Freud, Beethoven's blind quartets, transcripts of the Nuremburg trials, an automatic novel, and so on." She broke off. "What's that you're drawing?"

"Where?"

She pointed to the desk blotter, and Powers looked down and realised he had been unconsciously sketching an elaborate doodle, Whitby's four-armed sun. "It's nothing," he said. Somehow, though, it had a strangely compelling force.

Coma stood up to leave. "You must come and see us, Doctor. Kaldren has so much he wants to show you. He's just got hold of an old copy of the last signals sent back by the Mercury Seven twenty years ago when they reached the moon, and can't think about anything else. You remember the strange messages they recorded before they died, full of poetic ramblings about the white gardens. Now that I think about it they behaved rather like the plants in your zoo here."

She put her hands in her pockets, then pulled something out. "By the way, Kaldren asked me to give you this."

It was an old index card from the observatory library. In the centre had been typed the number:

96,688,365,498,720

"It's going to take a long time to reach zero at this rate," Powers remarked dryly. "I'll have quite a collection when we're finished."

After she had left he chucked the card into the waste bin and sat down at the desk, staring for an hour at the ideogram on the blotter.

Halfway back to his beach house the lake road forked to the left through a narrow saddle that ran between the hills to an abandoned Air Force weapons range on one of the remoter

salt lakes. At the nearer end were a number of small bunkers and camera towers, one or two metal shacks and a low-roofed storage hangar. The white hills encircled the whole area, shutting it off from the world outside, and Powers liked to wander on foot down the gunnery aisles that had been marked down the two-mile length of the lake towards the concrete sight-screens at the far end. The abstract patterns made him feel like an ant on a bone-white chess-board, the rectangular screens at one end and the towers and bunkers at the other like opposing pieces.

His session with Coma had made Powers feel suddenly dissatisfied with the way he was spending his last months. *Goodbye, Eniwetok*, he had written, but in fact systematically forgetting everything was exactly the same as remembering it, a cataloguing in reverse, sorting out all the books in the mental library and putting them back in their right places upside down.

Powers climbed one of the camera towers, leaned on the rail and looked out along the aisles towards the sight-screens. Richocheting shells and rockets had chipped away large pieces of the circular concrete bands that ringed the target bulls, but the outlines of the huge 100-yard-wide discs, alternately painted blue and red, were still visible.

For half an hour he stared quietly at them, formless ideas shifting through his mind. Then without thinking, he abruptly left the rail and climbed down the companionway. The storage hangar was fifty yards away. He walked quickly across to it, stepped into the cool shadows and peered around the rusting electric trolleys and empty flare drums. At the far end, behind a pile of lumber and bales of wire, were a stack of unopened cement bags, a mound of dirty sand and an old mixer.

Half an hour later he had backed the Buick into the hangar and hooked the cement mixer, charged with sand, cement and water scavenged from the drums lying around outside, onto the rear bumper, then loaded a dozen more bags into the car's trunk and rear seat. Finally he selected a few straight lengths of timber, jammed them through the window and set off across the lake towards the central target bull.

For the next two hours he worked away steadily in the centre of the great blue disc, mixing up the cement by hand, carrying it across to the crude wooden forms he had lashed together from the timber, smoothing it down so that it formed a six-inch high wall around the perimeter of the bull. He worked without pause, stirring the cement with a tire lever, scooping it out with a hub-cap prised off one of the wheels.

By the time he finished and drove off, leaving his equipment where it stood, he had completed a thirty-foot long section of wall.

four

June 7: Conscious, for the first time, of the brevity of each day. As long as I was awake for over twelve hours I still orientated my time around the meridian, morning and afternoon set their old rhythms. Now, with just over eleven hours of consciousness left, they form a continuous interval, like a length of tape measure. I can see exactly how much is left on the spool and can do little to affect the rate at which it unwinds. Spend the time slowly packing away the library; the crates are too heavy to move and lie where they are filled.

Cell count down to 400,000.

Woke 8:10. To sleep 7:15. (Appear to have lost my watch without realizing it, had to drive into town to buy another.)

June 14: 9½ hours. Time races, flashing past like an expressway. However, the last week of a holiday always goes faster than the first. At the present rate there should be about 4-5 weeks left. This morning I tried to visualise what the last week or so—the final, 3, 2, 1, out—would be like, had a sudden chilling attack of pure fear, unlike anything I've ever felt before. Took me half an hour to steady myself enough for an intravenous.

Kaldren pursues me like luminescent shadow. He has chalked up on the gateway '96,688,365,498,702.' Should confuse the mail man.

Woke 9:05. To sleep 6:36.

June 19: 8¾ hours. Anderson rang up this morning. I nearly put the phone down on him, but managed to go through the pretence of making the final arrangements. He congratulated me on my stoicism, even used the word 'heroic.' Don't feel it. Despair erodes everything—courage, hope, self-discipline, all the better qualities. It's so damned difficult to sustain that impersonal attitude of passive acceptance implicit in the scientific tradition. I try to think of Galileo before the Inquisition, Freud surmounting the endless pain of his jaw cancer surgery.

Met Kaldren downtown, had a long discussion about the Mercury Seven. He's convinced that they refused to leave the moon deliberately, after the 'reception party' waiting for them had put them in the cosmic picture. They were told by the mysterious emissaries from Orion that the exploration of deep space was pointless, that they were too late as the life of the universe is now virtually over! According to K. there are Air Force generals who take this nonsense seriously, but I suspect it's simply an obscure attempt on K.'s part to console me.

Must have the phone disconnected. Some contractor keeps calling me up about payment for 50 bags of cement he claims I collected ten days ago. Says he helped me load them onto a truck himself. I did drive Whitby's pick-up into town but only to get some lead screening. What does he think I'd do with all that cement? Just the sort of irritating thing you don't expect to hang over your final exit. (Moral: don't try too hard to forget Eniwetok.)

Woke 9:40. To sleep 4:15.

June 25: 7½ hours. Kaldren was snooping around the lab again today. Phoned me there. When I answered a recorded voice he'd rigged up rambled out a long string of numbers, like an insane super-Tim. These practical jokes of his get rather wearing. Fairly soon I'll have to go over and come to terms with him, much as I hate the prospect. Anyway, Miss Mars is a pleasure to look at.

One meal is enough now, topped up with a glucose shot. Sleep is still 'black,' completely unrefreshing. Last night I took a 16 mm. film of the first three hours, screened it this morning at the lab. The first true horror movie. I looked like a half-animated corpse.

Woke 10:25. To sleep 3:45.

July 3: 5¾ hours. Little done today. Deepening lethargy, dragged myself over to the lab, nearly left the road twice. Concentrated enough to feed the zoo and get the log up to date. Read through the operating manuals Whitby left for the last time, decided on a delivery rate of 40 rontgenst/min., target distance of 530 cm. Everything is ready now. Woke 11:05. To sleep 3:15.

Powers stretched, shifted his head slowly across the pillow, focussing on the shadows cast onto the ceiling by the blind. Then he looked down at his feet, saw Kaldren sitting on the end of the bed, watching him quietly.

"Hello, Doctor," he said, putting out his cigarette. "Late night? You look tired."

Powers heaved himself onto one elbow, glanced at his watch. It was just after eleven. For a moment his brain blurred, and he swung his legs around and sat on the edge of the bed, elbows on his knees, massaging some life into his face.

He noticed that the room was full of smoke. "What are you doing here?" he asked Kaldren.

"I came over to invite you to lunch." He indicated the bedside phone. "Your line was dead so I drove round. Hope you don't mind me climbing in. Rang the bell for about half an hour. I'm surprised you didn't hear it."

Powers nodded, then stood up and tried to smooth the creases out of his cotton slacks. He had gone to sleep without changing for over a week, and they were damp and stale.

As he started for the bathroom door Kaldren pointed to the camera tripod on the other side of the bed. "What's this? Going into the blue movie business, Doctor?"

Powers surveyed him dimly for a moment, glanced at the tripod without replying and then noticed his open diary on the bedside table. Wondering whether Kaldren had read the last entries, he went back and picked it up, then stepped into the bathroom and closed the door behind him.

From the mirror cabinet he took out a syringe and an ampule. After the shot he leaned against the door waiting for the stimulant to pick up.

Kaldren was in the lounge when he returned to him, reading the labels on the crates lying about in the centre of the floor.

"O.K., then," Powers told him, "I'll join you for lunch." He examined Kaldren carefully. He looked more subdued than usual; there was an air almost of deference about him.

"Good," Kaldren said. "By the way, are you leaving?"

"Does it matter?" Powers asked curtly. "I thought you were in Anderson's care."

Kaldren shrugged. "Please yourself. Come round at about twelve," he suggested, adding pointedly: "That'll give you time to clean up and change. What's that all over your shirt? Looks like lime."

Powers peered down, brushed at the white streaks. After Kaldren had left he threw the clothes away, took a shower and unpacked a clean suit from one of the trunks.

Until this liaison with Coma, Kaldren had lived alone in the old abstract summer house on the north shore of the lake. This was a seven-storey folly originally built by an eccentric

millionaire mathematician in the form of a spiralling concrete ribbon that wound around itself like an insane serpent, serving walls, floors and ceilings. Only Kaldren had solved the building, a geometric model of $\sqrt{-1}$, and consequently he had been able to take it off the agents' hands at a comparatively low rent. In the evenings Powers had often watched him from the laboratory, striding restlessly from one level to the next, swinging through the labyrinth of inclines and terraces to the rooftop, where his lean angular figure stood out like a gallows against the sky, his lonely eyes sifting out radio lanes for the next day's trapping.

Powers noticed him there when he drove up at noon, poised on a ledge 150 feet above, head raised theatrically to the sky.

"Kaldren!" he shouted up suddenly into the silent air, half-hoping he might be jolted into losing his footing.

Kaldren broke out of his reverie and glanced down into the court. Grinning obliquely, he waved his right arm in a slow semicircle.

"Come up," he called, then turned back to the sky.

Powers leaned against the car. Once, a few months previously, he had accepted the same invitation, stepped through the entrance and within three minutes lost himself helplessly in a second-floor cul de sac. Kaldren had taken half an hour to find him.

Powers waited while Kaldren swung down from his eyrie, vaulting through the wells and stairways, then rode up in the elevator with him to the penthouse suite.

They carried their cocktails through into a wide glass-roofed studio, the huge white ribbon of concrete uncoiling around them like toothpaste squeezed from an enormous tube. On the staged levels running parallel and across them rested pieces of grey abstract furniture, giant photographs on angled screens, carefully labelled exhibits laid out on low tables, all dominated by twenty-foot-high black letters on the rear wall which spelt out the single vast word:

YOU

Kaldren pointed to it. "What you might call the supraliminal approach." He gestured Powers in conspiratorially, finishing his drink in a gulp. "This is *my* laboratory, Doctor," he said with a note of pride. "Much more significant than yours, believe me."

Powers smiled wryly to himself and examined the first exhibit, an old ECG tape traversed by a series of faded inky wiggles. It was labelled: "Einstein, A.; Alpha Waves, 1922."

He followed Kaldren around, sipping slowly at his drink, enjoying the brief feeling of alertness the amphetamine provided. Within two hours it would fade, leave his brain feeling like a block of blotting paper.

Kaldren chattered away, explaining the significance of the so-called Terminal Documents. "They're end-prints, Powers, final statements, the products of total fragmentation. When I've got enough together I'll build a new world for myself out of them." He picked a thick paper-bound volume off one of the tables, riffled through its pages. "Association tests of the Nuremburg Twelve. I have to include these . . ."

Powers strolled on absently without listening. Over in the corner were what appeared to be three ticker-tape machines, lengths of tape hanging from their mouths. He wondered whether Kaldren was misguided enough to be playing the stock market, which had been declining slowly for twenty years.

"Powers," he heard Kaldren say. "I was telling you about the Mercury Seven." He pointed to a collection of type-written sheets tacked to a screen. "These are transcripts of their final signals radioed back from the recording monitors."

Powers examined the sheets cursorily, read a line at random.

". . . BLUE . . . PEOPLE . . . RE-CYCLE . . . ORION . . . TELEMETERS . . ."

Powers nodded noncommittally. "Interesting. What are the ticker tapes for over there?"

Kaldren grinned. "I've been waiting for months for you to ask me that. Have a look."

Powers went over and picked up one of the tapes. The machine was labelled: "Auriga 225-G. Interval: 69 hours."

The tape read:

96,688,365,498,695

96,688,365,498,694

96,688,365,498,693

96,688,365,498,692

Powers dropped the tape. "Looks rather familiar. What does the sequence represent?"

Kaldren shrugged. "No one knows."

"What do you mean? It must replicate something."

"Yes, it does. A diminishing mathematical progression. A count-down, if you like."

Powers picked up the tape on the right, tabbed: "Aries 44R951. Interval: 49 days."

Here the sequence ran:

876,567,988,347,779,877,654,434

876,567,988,347,779,877,654,433

876,567,988,347,779,877,654,432

Powers looked round. "How long does it take each signal to come through?"

"Only a few seconds. They're tremendously compressed laterally, of course. A computer at the observatory breaks them down. They were first picked up at Jodrell Bank about twenty years ago. Nobody bothers to listen to them now."

Powers turned to the last tape.

6,554

6,553

6,552

6,551

"Nearing the end of its run," he commented. He glanced at the label on the hood, which read: "Unidentified radio source, Canes Venatici. Interval: 97 weeks."

He showed the tape to Kaldren. "Soon be over."

Kaldren shook his head. He lifted a heavy directory-sized volume off a table, cradled it in his hands. His face had suddenly become sombre and haunted. "I doubt it," he said. "Those are only the last four digits. The whole number contains over 50 million."

He handed the volume to Powers, who turned to the title page. "Master Sequence of Serial Signal received by Jodrell Bank Radio-Observatory, University of Manchester, England, 0012-59 hours, 21-5-72. Source: NGC 9743, Canes Venatici." He thumbed the thick stack of closely printed pages, millions of numerals, as Kaldren had said, running up and down across a thousand consecutive pages.

Powers shook his head, picked up the tape again and stared at it thoughtfully.

"The computer only breaks down the last four digits," Kaldren explained. "The whole series comes over in each 15-seconds-long package, but it took IBM more than two years to unscramble one of them."

"Amazing," Powers commented. "But what is it?"

"A count-down, as you can see. NGC 9743, somewhere in Canes Venatici. The big spirals there are breaking up, and they're saying goodbye. God knows who they think we are but they're letting us know all the same, beaming it out on the hydrogen line for everyone in the universe to hear." He paused. "Some people have put other interpretations on them, but there's one piece of evidence that rules out everything else."

"Which is?"

Kaldren pointed to the last tape from Canes Venatici. "Simply that it's been estimated that by the time this series reaches zero the universe will have just ended."

Powers fingered the tape reflectively. "Thoughtful of them to let us know what the real time is," he remarked.

"I agree, it is," Kaldren said quietly. "Applying the inverse square law that signal source is broadcasting at a strength of about three million megawatts raised to the hundredth power. About the size of the entire Local Group. Thoughtful is the word."

Suddenly he gripped Powers' arm, held it tightly and peered into his eyes closely, his throat working with emotion.

"You're not alone, Powers, don't think you are. These are the voices of time, and they're all saying goodbye to you. Think of yourself in a wider context. Every particle in your body, every grain of sand, every galaxy carries the same signature. As you've just said, you know what the time is now, so what does the rest matter? There's no need to go on looking at the clock."

Powers took his hand, squeezed it firmly. "Thanks, Kaldren. I'm glad you understand." He walked over to the window, looked down across the white lake. The tension between himself and Kaldren had dissipated; he felt that all his obligations to him had at last been met. Now he wanted to leave as quickly as possible, forget him as he had forgotten the faces of the countless other patients whose exposed brains had passed between his fingers.

He went back to the ticker machines, tore the tapes from their slots and stuffed them into his pockets. "I'll take these along to remind myself. Say goodbye to Coma for me, will you?"

He moved towards the door. When he reached it he looked back to see Kaldren standing in the shadow of the three giant letters on the far wall, his eyes staring listlessly at his feet.

As Powers drove away he noticed that Kaldren had gone up onto the roof, watched him in the driving mirror waving slowly until the car disappeared around a bend.

five

The outer circle was now almost complete. A narrow segment, an arc about ten feet long, was missing, but otherwise the low perimeter wall ran continuously six inches off the concrete floor around the outer lane of the target bull, enclosing the huge rebus within it. Three concentric circles, the

largest a hundred yards in diameter, separated from each other by ten-foot intervals, formed the rim of the device, divided into four segments by the arms of an enormous cross radiating from its centre, where a small round platform had been built a foot above the ground.

Powers worked swiftly, pouring sand and cement into the mixer, tipping in water until a rough paste formed, then carrying it across to the wooden forms and tamping the mixture down into the narrow channel.

Within ten minutes he had finished. He quickly dismantled the forms before the cement had set and slung the timbers into the back seat of the car. Dusting his hands on his trousers, he went over to the mixer and pushed it fifty yards away into the long shadow of the surrounding hills.

Without pausing to survey the gigantic cipher on which he had laboured patiently for so many afternoons, he climbed into the car and drove off on a wake of bone-white dust, splitting the pools of indigo shadow.

He reached the laboratory at three o'clock, and jumped from the car as it lurched back on its brakes. Inside the entrance he first switched on the lights, then hurried round, pulling the sun curtains down and shackling them to the floor slots, effectively turning the dome into a steel tent.

In their tanks behind him the plants and animals stirred quietly, responding to the sudden flood of cold fluorescent light. Only the chimpanzee ignored him. It sat on the floor of its cage, neurotically jamming the puzzle dice into the polythene bucket, exploding in bursts of sudden rage when the pieces refused to fit.

Powers went over to it, noticing the shattered glass fibre reinforcing panels bursting from the dented helmet. Already the chimp's face and forehead were bleeding from self-inflicted blows. Powers picked up the remains of the geranium that had been hurled through the bars, attracted the chimp's attention with it, then tossed a black pellet he had taken from a capsule in the desk drawer. The chimp caught it with a quick flick of the wrist, for a few seconds juggled the pellet with a couple of dice as it concentrated on the puzzle, then pulled it out of the air and swallowed it in a gulp.

Without waiting, Powers slipped off his jacket and stepped towards the X-ray theatre. He pulled back the high sliding doors to reveal the long glassy metallic snout of the Maxitron, then started to stack the lead screening shields against the rear wall.

A few minutes later the generator hammed into life.

The anemone stirred. Basking in the warm subliminal sea of radiation rising around it, prompted by countless pelagic memories, it reached tentatively across the tank, groping blindly towards the dim uterine sun. Its tendrils flexed, the thousands of dormant neural cells in their tips regrouping and multiplying, each harnessing the unlocked energies of its nucleus. Chains forged themselves, latices tiered upwards into multi-faceted lenses, focussed slowly on the vivid spectral outlines of the sounds dancing like phosphorescent waves around the darkened chamber of the dome.

Gradually an image formed, revealing an enormous black fountain that poured an endless stream of brilliant light over the circle of benches and tanks. Beside it a figure moved, adjusting the flow through its mouth. As it stepped across the floor its feet threw off vivid bursts of colour, its hands racing along the benches conjured up a dazzling chiarascuro, balls of blue and violet light that exploded fleetingly in the darkness like miniature star-shells.

Photons murmured. Steadily, as it watched the glimmering screen of sounds around it, the anemone continued to expand. Its ganglia linked, heeding a new source of stimuli from the delicate diaphragms in the crown of its notochord. The silent outlines of the laboratory began to echo softly, waves of muted sound fell from the arc lights and echoed off the benches and furniture below. Etched in sound, their angular forms resonated with sharp persistent overtones. The plastic-ribbed chairs were a buzz of staccato discords, the square-sided desk a continuous double-featured tone.

Ignoring these sounds once they had been perceived, the anemone turned to the ceiling, which reverberated like a shield in the sounds pouring steadily from the fluorescent tubes. Streaming through a narrow skylight, its voice clear and strong, interweaved by numberless overtones, the sun sang . . .

It was a few minutes before dawn when Powers left the laboratory and stepped into his car. Behind him the great dome lay silently in the darkness, the thin shadows of the white moonlit hills falling across its surface. Powers free-wheeled the car down the long curving drive to the lake road below, listening to the tires cutting across the blue gravel, then let out the clutch and accelerated the engine.

As he drove along, the limestone hills half hidden in the darkness on his left, he gradually became aware that, although no longer looking at the hills, he was still in some oblique way conscious of their forms and outlines in the back of his mind. The sensation was undefined but none the less

certain, a strange almost visual impression that emanated most strongly from the deep clefts and ravines dividing one cliff face from the next. For a few minutes Powers let it play upon him, without trying to identify it, a dozen strange images moving across his brain.

The road swung up around a group of chalets built onto the lake shore, taking the car right under the lee of the hills, and Powers suddenly felt the massive weight of the escarpment rising up into the dark sky like a cliff of luminous chalk, and realised the identity of the impression now registering powerfully within his mind. Not only could he see the escarpment, but he was aware of its enormous age, felt distinctly the countless millions of years since it had first reared out of the magma of the earth's crust. The ragged crests three hundred feet above him, the dark gulleys and fissures, the smooth boulders by the roadside at the foot of the cliff, all carried a distinct image of themselves across to him, a thousand voices that together told of the total time that had elapsed in the life of the escarpment, a psychic picture as defined and clear as the visual image brought to him by his eyes.

Involuntarily, Powers had slowed the car, and turning his eyes away from the hill face he felt a second wave of time sweep across the first. The image was broader but of shorter perspectives, radiating from the wide disc of the salt lake, breaking over the ancient limestone cliffs like shallow rollers dashing against a towering headland.

Closing his eyes, Powers lay back and steered the car along the interval between the two time fronts, feeling the images deepen and strengthen within his mind. The vast age of the landscape, the inaudible chorus of voices resonating from the lake and from the white hills, seemed to carry him back through time, down endless corridors to the first thresholds of the world.

He turned the car off the road along the track leading towards the target range. On either side of the culvert the cliff faces boomed and echoed with vast impenetrable time fields, like enormous opposed magnets. As he finally emerged between them onto the flat surface of the lake it seemed to Powers that he could feel the separate identity of each sand grain and salt crystal calling to him from the surrounding ring of hills.

He parked the car beside the mandala and walked slowly towards the outer concrete rim curving away into the shadows. Above him he could hear the stars, a million cosmic voices that crowded the sky from one horizon to the next, a true canopy of time. Like jostling radio beacons, their long aisles interlocking at countless angles, they plunged into the sky

from the narrowest recesses of space. He saw the dim red disc of Sirius, heard its ancient voice, untold millions of years old, dwarfed by the huge spiral nebulae in Andromeda, a gigantic carousel of vanished universes, their voices almost as old as the cosmos itself. To Powers the sky seemed an endless babel, the time-song of a thousand galaxies overlaying each other in his mind. As he moved slowly toward the centre of the mandala he craned up at the glittering traverse of the Milky Way, searching the confusion of clamouring nebulae and constellations.

Stepping into the inner circle of the mandala, a few yards from the platform at its centre, he realised that the tumult was beginning to fade, and that a single stronger voice had emerged and was dominating the others. He climbed onto the platform and raised his eyes to the darkened sky, moving through the constellations to the island galaxies beyond them, hearing the thin archaic voices reaching to him across the millenia. In his pockets he felt the paper tapes, and turned to find the distant diadem of Canes Venatici, heard its great voice mounting in his mind.

Like an endless river, so broad that its banks were below the horizons, it flowed steadily towards him, a vast course of time that spread outwards to fill the sky and the universe, enveloping everything within them. Moving slowly, the forward direction of its majestic current almost imperceptible, Powers knew that its source was the source of the cosmos itself. As it passed him, he felt its massive magnetic pull, let himself be drawn into it, borne gently on its powerful back. Quietly it carried him away, and he rotated slowly, facing the direction of the tide. Around him the outlines of the hills and the lake had faded, but the image of the mandala, like a cosmic clock, remained fixed before his eyes, illuminating the broad surface of the stream. Watching it constantly, he felt his body gradually dissolving, its physical dimensions melting into the vast continuum of the current, which bore him out into the centre of the great channel sweeping him onward, beyond hope now but at rest, down the broadening reaches of the river of eternity.

As the shadows faded, retreating into the hill slopes, Kaldren stepped out of his car, walked hesitantly towards the concrete rim of the outer circle. Fifty yards away, at the centre, Coma knelt beside Powers' body, her small hands pressed to his dead face. A gust of wind stirred the sand, dislodging a strip of tape that drifted towards Kaldren's feet. He bent down and picked it up, then rolled it carefully in his hands and slipped it into his pocket. The dawn air was cold,

and he turned up the collar of his jacket, watching Coma impassively.

"It's six o'clock," he told her after a few minutes. "I'll go and get the police. You stay with him." He paused and then added: "Don't let them break the clock."

Coma turned and looked at him. "Aren't you coming back?"

"I don't know." Nodding to her, Kaldren swung on his heel and went over to the car.

He reached the lake road, five minutes later parked the car in the drive outside Whitby's laboratory.

The dome was in darkness, all its windows shuttered, but the generator still hummed in the X-ray theatre. Kaldren stepped through the entrance and switched on the lights. In the theatre he touched the grilles of the generator, felt the warm cylinder of the beryllium end-window. The circular target table was revolving slowly, its setting at 1 r.p.m., a steel restraining chair shackled to it hastily. Grouped in a semicircle a few feet away were most of the tanks and cages, piled on top of each other haphazardly. In one of them an enormous squidlike plant had almost managed to climb from its vivarium. Its long translucent tendrils clung to the edges of the tank, but its body had burst into a jellified pool of globular mucilage. In another an enormous spider had trapped itself in its own web and hung helplessly in the centre of a huge three-dimensional maze of phosphorescing thread, twitching spasmodically.

All the experimental plants and animals had died. The chimp lay on its back among the remains of the hutch, the helmet forward over its eyes. Kaldren watched it for a moment, then sat down on the desk and picked up the phone.

While he dialled the number he noticed a film reel lying on the blotter. For a moment he stared at the label, then slid the reel into his pocket beside the tape.

After he had spoken to the police he turned off the lights, went out to the car, and drove off slowly down the drive.

When he reached the summer house the early sunlight was breaking across the ribbonlike balconies and terraces. He took the lift to the penthouse, made his way through into the museum. One by one he opened the shutters and let the sunlight play over the exhibits. Then he pulled a chair over to a side window, sat back and stared up at the light pouring through into the room.

Two or three hours later he heard Coma outside, calling up to him. After half an hour she went away, but a little later a second voice appeared and shouted up at Kaldren. He left his

chair and closed all the shutters overlooking the front courtyard, and eventually he was left undisturbed.

Kaldren returned to his seat and lay back quietly, his eyes gazing across the lines of exhibits. Half-asleep, periodically he leaned up and adjusted the flow of light through the shutter, thinking to himself, as he would do through the coming months, of Powers and his strange mandala, and of the seven and their journey to the white gardens of the moon, and the blue people who had come from Orion and spoken in poetry to them of ancient beautiful worlds beneath golden suns in the island galaxies, vanished forever now in the myriad deaths of the cosmos.

THE SOUND-SWEEP

ONE

By midnight Madame Gioconda's headache had become intense. All day the derelict walls and ceiling of the sound stage had reverberated with the endless din of traffic accelerating across the mid-town flyover which arched fifty feet above the studio's roof, a frenzied hypomaniac babel of jostling horns, shrilling tires, plunging brakes and engines that hammered down the empty corridors and stairways to the sound stage on the second floor, making the faded air feel leaden and angry.

Exhausting but at least impersonal, these sounds Madame Gioconda could bear. At dusk, however, when the flyover quieted, they were overlaid by the mysterious clapping of her phantoms, the sourceless applause that rustled down onto the stage from the darkness around her. At first a few scattered ripples from the front rows, it soon spread to the entire auditorium, mounting to a tumultuous ovation in which she suddenly detected a note of sarcasm, a single shout of derision that drove a spear of pain through her forehead, followed by an uproar of boos and catcalls that filled the tortured air. It always drove her away towards her couch, where she lay gasping helplessly until Mangon arrived at midnight, hurrying onto the stage with his sonovac.

Understanding her, he first concentrated on sweeping the walls and ceiling clean, draining away the heavy depressing underlayer of traffic noises. Carefully he ran the long snout of the sonovac over the ancient scenic flats (relics of her previous roles at the Metropolitan Opera House) which screened in Madame Gioconda's makeshift home—the great collapsing Byzantine bed (*Othello*) mounted against the microphone turret; the huge framed mirrors with their peeling silver screen (*Orpheus*) stacked in one corner by the bandstand; the stove (*Travatore*) set up on the programme director's

podium; the gilt-trimmed dressing table and wardrobe (*Figaro*) stuffed with newspaper and magazine clippings. He swept them methodically, moving the sonovac's nozzle in long strokes, drawing out the dead residues of sound that had accumulated during the day.

By the time he finished the air was clear again, the atmosphere lightened, its overtones of fatigue and irritation dissipated. Gradually Madame Gioconda recovered. Sitting up weakly, she smiled wanly at Mangon. Mangon grinned back encouragingly, slipped the kettle onto the stove for Russian tea—sweetened by the usual phenobarbitone chaser—switched off the sonovac and indicated to her that he was going outside to empty it.

Down in the alley behind the studio he clipped the sonovac onto the intake manifold of the sound truck. The vacuum drained in a few seconds, but he waited a discretionary two or three minutes before returning, keeping up the pretence that Madame Gioconda's phantom audience was real. Of course the cylinder was always empty, containing only the usual daily detritus—the sounds of a door slam, a partition collapsing somewhere or the kettle whistling, a grunt or two, and later, when the headaches began, Madame Gioconda's pitiful moanings. The riotous applause, that would have lifted the roof off the Met, let alone a small radio station, the jeers and hoots of derision were, he knew, quite imaginary, figments of Madame Gioconda's world of fantasy. They were phantoms from the past of a once great prima donna who had been dropped by her public and had retreated into her imagination, each evening conjuring up a blissful dream of being once again applauded by a full house at the Metropolitan. Guilt and resentment turned the dream sour by midnight, inverting it into a nightmare of fiasco and failure.

Why she should torment herself was difficult to understand, but at least the nightmare kept Madame Gioconda just this side of sanity. Mangon, who revered and loved her, would have been the last person in the world to disillusion her. Each evening, when he finished his calls for the day, he would drive his sound truck all the way over from the West Side to the abandoned radio station under the flyover at the deserted end of F Street. There he would go through the pretence of sweeping Madame Gioconda's apartment on the stage of studio 2, charging no fee; and he would make tea and listen to her reminiscences and plans for revenge, then see her asleep and tiptoe out, a wry but pleased smile on his youthful face.

He had been calling on Madame Gioconda for nearly a year, but what his precise role was in relation to her he had

not yet decided. Oddly enough, although he was more or less indispensable now to the effective operation of her fantasy world, she showed little personal interest or affection for Mangon. He assumed that this indifference was merely part of the autocratic personality of a world-famous prima donna, particularly one very conscious of the tradition—now, alas, meaningless—of Melba, Callas, Gioconda. To serve at all was the privilege. In time, perhaps, Madame Gioconda might accord him some sign of favour.

Without him, certainly, her prognosis would have been poor. Lately the headaches had become more menacing, as she insisted that the applause was growing stormier, the boos and catcalls more vicious. Whatever the psychic mechanism generating the fantasy system, Mangon realized that ultimately she would need him at the studio all day, holding back the enveloping tides of nightmare and insanity with dummy passes of the sonovac. Then, perhaps, when the dream crumbled, he would regret having helped her to delude herself. With luck, though, she might achieve her ambition of making a comeback. She had told him something of her scheme—a serpentine mixture of blackmail and bribery—and privately Mangon hoped to launch a plot of his own to return her to popularity. By now she had unfortunately reached the point where success alone could save her from disaster.

She was sitting up when he returned, propped back on an enormous gold lamé cushion, the single lamp at the foot of the couch throwing a semicircle of light onto the great flats which divided the sound stage from the auditorium. These were all from her last operatic role—*The Medium*—and represented a complete interior of the old spiritualist's seance chamber, the one coherent feature in Madame Gioconda's present existence. Surrounded by fragments from a dozen roles, even Madame Gioconda herself, Mangon reflected, seemed compounded of several separate identities. A tall figure, with full shapely shoulders and massive ribcage, she had a large handsome face topped by a magnificent coiffure of rich blue-black hair—the exact prototype of the classical diva. She must have been almost fifty, yet her soft creamy complexion and small features were those of a child. The eyes, however, belied her. Large and watchful, slashed with mascara, they regarded the world around her balefully, narrowing even as Mangon approached. Her teeth too were bad, stained by tobacco and cheap cocaine. When she was roused, and her full violet lips curled with rage, revealing the blackened bulks of her dentures and the acid flickering tongue, her mouth looked like a very vent of hell. Altogether she was a formidable woman.

As Mangon brought her tea she heaved herself up and made room for him by her feet among the debris of beads, loose diary pages, horoscopes and jewelled address books that littered the couch. Mangon sat down, surreptitiously noting the time (his first calls were at 9:30 the next morning and loss of sleep deadened his acute hearing), and prepared himself to listen to her for half an hour.

Suddenly she flinched, shrank back into the cushion and gestured agitatedly in the direction of the darkened bandstand.

"They're still clapping!" she shrieked. "For God's sake sweep them away, they're driving me insane. Oooooohh . . ." she rasped theatrically, "over there, quickly . . . !"

Mangon leapt to his feet. He hurried over to the bandstand and carefully focussed his ears on the tiers of seats and plywood music stands. They were all immaculately clean, well below the threshold at which embedded sounds began to radiate detectable echoes. He turned to the corner walls and ceiling. Listening very carefully, he could just hear seven muted pads, the dull echoes of his footsteps across the floor. They faded and vanished, followed by a low thrashing noise like blurred radio static—in fact Madame Gioconda's present tantrum. Mangon could almost distinguish the individual words, but repetition muffled them.

Madame Gioconda was still writhing about on the couch, evidently not to be easily placated, so Mangon climbed down off the stage and made his way through the auditorium to where he had left his sonovac by the door. The power lead was outside in the truck but he was sure Madame Gioconda would fail to notice.

For five minutes he worked away industriously, pretending to sweep the bandstand again, then put down the sonovac and returned to the couch.

Madame Gioconda emerged from the cushion, sounded the air carefully with two or three slow turns of the head, and smiled at him.

"Thank you, Mangon," she said silkily, her eyes watching him thoughtfully. "You've saved me again from my assassins. They've become so cunning recently they can even hide from you."

Mangon smiled ruefully to himself at this last remark. So he had been a little too perfunctory before; Madame Gioconda was keeping him up to the mark.

However, she seemed genuinely grateful. "Mangon, my dear," she reflected as she remade her face in the mirror of an enormous compact, painting on magnificent green eyes like a cobra's, "what would I do without you? How can I ever repay you for looking after me?"

The questions, whatever their sinister undertones (had he detected them, Mangon would have been deeply shocked) were purely rhetorical. All their conversations, for that matter, were entirely one-sided. For Mangon was a mute. From the age of three, when his mother had savagely punched him in the throat to stop his crying, he had been stone dumb, his vocal chords irreparably damaged. In all their endless exchanges of midnight confidences, Mangon had contributed not a single spoken word.

His muteness, naturally, was part of the attraction he felt for Madame Gioconda. Both of them in a sense had lost their voices, he to a cruel mother, she to a fickle and unfaithful public. This bound them together, gave them a shared sense of life's injustice, though Mangon, like all innocents, viewed his misfortune without rancour. Both, too, were social outcasts. Rescued from his degenerate parents when he was four, Mangon had been brought up in a succession of state institutions, a solitary wounded child. His one talent had been his remarkable auditory powers, and at fourteen he was apprenticed to the Metropolitan Sonic Disposal Service. Regarded as little better than garbage collectors, the sound-sweeps were an outcast group of illiterates. They were all mutes (the city authorities preferred these—their discretion could be relied upon) and social cripples who lived in a chain of isolated shacks on the edge of an old explosives plant in the sand dunes to the north of the city which served as the sonic dump.

Mangon had made no friends among the sound-sweeps, and Madame Gioconda was the first person in his life with whom he had been intimately involved. Apart from the pleasure of being able to help her, a considerable factor in Mangon's devotion was that until her decline she had represented (as to all mutes) the most painful possible reminder of his own voiceless condition, and that now he could at last come to terms with years of unconscious resentment.

This soon done, he devoted himself wholeheartedly to serving Madame Gioconda.

Inhaling moodily on a black cigarette clamped into a long jade holder, she was outlining her plans for a comeback. These had been maturing for several months and involved nothing less than persuading Hector LeGrande, chairman-in-chief of Video City, the huge corporation that transmitted a dozen TV and radio channels, into providing her with a complete series of television spectacles. Built around Madame Gioconda and lavishly dressed and orchestrated, they would spearhead the international revival of classical opera that was her unfading dream.

"La Scala, Covent Garden, the Met—what are they now?" she demanded angrily. "Bowling alleys! Can you believe, Mangon, that in those immortal theatres where I created my Tosca, my Butterfly, my Bruneilde, they now have—" she spat out a gust of smoke "—beer and skittles!"

Mangon shook his head sympathetically. He pulled a pencil from his breast pocket and on the wrist-pad stitched to his left sleeve wrote:

Mr. LeGrande?

Madame Gioconda read the note, let it fall to the floor.

"Hector? Those lawyers poison him. He's surrounded by them; I think they steal all my telegrams to him. Of course Hector had a complete breakdown on the spectaculars. Imagine, Mangon, what a scoop for him, a sensation! 'The great Gioconda will appear on television!' Not just some moronic bubblegum girl, but the Gioconda in person."

Exhausted by this vision, Madame Gioconda sank back into her cushion, blowing smoke limply through the holder.

Mangon wrote:

Contract?

Madame Gioconda frowned at the note, then pierced it with the glowing end of her cigarette.

"I am having a new contract drawn up. Not for the mere 300,000 I was prepared to take at first, nor even 500,000. For each show I shall now demand precisely *one million* dollars. Nothing less! Hector will have to pay for ignoring me. Anyway, think of the publicity value of such a figure. Only a star could think of such vulgar extravagance. If he's short of cash he can sack all those lawyers. Or devalue the dollar; I don't mind."

Madame Gioconda hooted with pleasure at the prospect. Mangon nodded, then scribbled another message.

Be practical

Madame Gioconda ground out her cigarette. "You think I'm raving, don't you, Mangon? 'Fantastic dreams, million-dollar contract—poor old fool.' But let me assure you that Hector will be only too eager to sign the contract. And I don't intend to rely solely on his good judgment as an impresario." She smirked archly to herself.

What else?

Madame Gioconda peered round the darkened stage, then lowered her eyes.

"You see, Mangon, Hector and I are very old friends. You know what I mean, of course?" She waited for Mangon, who had swept out a thousand honeymoon hotel suites, to nod and then continued: "How well I remember that first season at Bayreuth, when Hector and I . . ."

Mangon stared unhappily at his feet as Madame Gioconda outlined this latest venture into blackmail. Certainly she and LeGrande had been intimate friends—the clippings scattered around the stage testified frankly to this. In fact, were it not for the small monthly cheque which LeGrande sent Madame Gioconda she would long previously have disintegrated. To turn on him and threaten ancient scandal (LeGrande was shortly to enter politics) was not only grotesque but extremely dangerous, for LeGrande was ruthless and unsentimental. Years earlier he had used Madame Gioconda as a stepping stone, reaping all the publicity he could from their affair, then abruptly kicking her away.

Mangon fretted. A solution to her predicament was hard to find. Brought about through no fault of her own, Madame Gioconda's decline was all the harder to bear. Since the introduction a few years earlier of ultrasonic music, the human voice—indeed, audible music of any type—had gone completely out of fashion. Ultrasonic music, employing a vastly greater range of octaves, chords and chromatic scales than perceptible to the human ear, provided a direct neural link between the sound stream and the auditory lobes, generating an apparently sourceless sensation of harmony, rhythm, cadence and melody uncontaminated by the noise and vibration of audible music. The re-scoring of the classical repertoire allowed the ultrasonic audience the best of both worlds. The majestic rhythms of Beethoven, the popular melodies of Tchaikovsky, the complex fugal elaborations of Bach, the abstract images of Schoenberg—all these were raised in frequency above the threshold of conscious audibility. Not only did they become inaudible, but the original works were re-scored for the much wider range of the ultrasonic orchestra, became richer in texture, more profound in theme, more sensitive, tender or lyrical as the ultrasonic arranger chose.

The first casualty in this change-over was the human voice. This alone of all instruments could not be re-scored, because its sounds were produced by nonmechanical means which the neurophonic engineer could never hope, or bother, to duplicate.

The earliest ultrasonic recordings had met with resistance, even ridicule. Radio programmes consisting of nothing but silence interrupted at half-hour intervals by commercial breaks seemed absurd. But gradually the public discovered that the silence was golden, that after leaving the radio switched to an ultrasonic channel for an hour or so a pleasant atmosphere of rhythm and melody seemed to generate itself spontaneously around them. When an announcer suddenly stated that an ultrasonic version of Mozart's Jupiter Symphony or Tchai-

kovsky's Pathétique had just been played the listener identified the real source.

A second advantage of ultrasonic music was that its frequencies were so high they left no resonating residues in solid structures, and consequently there was no need to call in the sound-sweep. After an audible performance of most symphonic music, walls and furniture throbbed for days with disintegrating residues that made the air seem leaden and tumid, made an entire room virtually uninhabitable.

An immediate result was the swift collapse of all but a few symphony orchestras and opera companies. Concert halls and opera houses closed overnight. In the age of noise the tranquillising balms of silence began to be rediscovered.

But the final triumph of ultrasonic music had come with a second development—the short-playing record, spinning at 900 r.p.m., which condensed the 45 minutes of a Beethoven symphony to 20 seconds of playing time, the three hours of a Wagner opera to little more than two minutes. Compact and cheap, SP records sacrificed nothing to brevity. One 30-second SP record delivered as much neurophonic pleasure as a natural length recording, but with deeper penetration, greater total impact.

Ultrasonic SP records swept all others off the market. Sonic LP records became museum pieces—only a crank would choose to listen to an audible full-length version of *Siegfried* or the *Barber of Seville* when he could have both wrapped up inaudibly inside the same five-minute package and appreciate their full musical value.

The heyday of Madame Gioconda was over. Unceremoniously left on the shelf, she had managed to survive for a few months vocalising on radio commercials. Soon these too went ultrasonic. In a despairing act of revenge she bought out the radio station which fired her and made her home on one of the sound stages. Over the years the station became derelict and forgotten, its windows smashed, its neon portico collapsing, its aerials rusting. The huge eight-lane flyover built across it sealed it conclusively into the past.

Now Madame Gioconda proposed to win her way back at stiletto point.

Mangon watched her impassively as she ranted on nastily in a cloud of purple cigarette smoke, a large seedy witch. The phenobarbitone was making her drowsy and her threats and ultimatums were becoming disjointed.

"... memoirs too, don't forget, Hector. Frank exposure, no holes barred. I mean ... damn, have to get a ghost. Hotel de Paris at Monte, lots of pictures. Oh yes, I kept the photographs." She grubbed about on the couch, came up with

a crumpled soap coupon and a supermarket pay slip. "Wait till those lawyers see them. Hector—" Suddenly she broke off, stared glassily at Mangon and sagged back.

Mangon waited until she was finally asleep, then stood up and peered closely at her. She looked forlorn and desperate. He watched her reverently for a moment, then tiptoed to the rheostat mounted on the control panel behind the couch, damped down the lamp at Madame Gioconda's feet and left the stage.

He sealed the auditorium doors behind him, made his way down to the foyer and stepped out, sad but at the same time oddly exhilarated, into the cool midnight air. At last he accepted that he would have to act swiftly if he was to save Madame Gioconda.

t w o

Driving his sound truck into the city shortly after nine the next morning, Mangon decided to postpone his first call—the weird Neo-Corbusier Episcopalian Oratory sandwiched among the office blocks in the downtown financial sector— and instead turned west on Mainway and across the park towards the white-faced apartment batteries which reared up above the trees and lakes along the north side.

The Oratory was a difficult and laborious job that would take him three hours of concentrated effort. The Dean had recently imported some rare 13th Century pediments from the Church of St. Francis at Assisi, beautiful sonic matrices rich with seven centuries of Gregorian chant, overlaid by the timeless tolling of the angelus. Mounted into the altar, they emanated an atmosphere resonant with litany and devotion, a mellow, deeply textured hymn that silently evoked the most sublime images of prayer and meditation.

But at 50,000 dollars each they also represented a terrifying hazard to the clumsy sound-sweep. Only two years earlier the entire north transept of Rheims Cathedral, rose window intact, purchased for a record 1,000,000 dollars and re-erected in the new Cathedral of St. Joseph at San Diego, had been drained of its priceless heritage of tonal inlays by a squad of illiterate sound-sweeps who had misread their instructions and accidentally swept the wrong wall.

Even the most conscientious sound-sweep was limited by his skill, and Mangon, with his auditory super-sensitivity, was

greatly in demand for his ability to sweep selectively, draining from the walls of the Oratory all extraneous and discordant noises—coughing, crying, the clatter of coins and mumble of prayer—leaving behind the chorales and liturgical chants which enhanced their devotional overtones. His skill alone would lengthen the life of the Assisi pediments by twenty years; without him they would soon become contaminated by the miscellaneous traffic of the congregation. Consequently he had no fears that the Dean would complain if he failed to appear as usual that morning.

Halfway along the north side of the park he swung off into the forecourt of a huge forty-storey apartment block, a glittering white cliff ribbed by jutting balconies. Most of the apartments were Superlux duplexes occupied by show business people. No one was about, but as Mangon entered the hallway, sonovac in one hand, the marble walls and columns buzzed softly with the echoing chatter of guests leaving parties four or five hours earlier.

In the elevator the residues were clearer—confident male tones, the sharp wheedling of querulous wives, the soft negatives of amatory blondes, punctuated by countless repetitions of 'dahling.' Mangon ignored the echoes, which were almost inaudible, a dim insect hum. He grinned to himself as he rode up to the penthouse apartment; if Madame Gioconda had known his destination she would have strangled him on the spot.

Ray Alto, doyen of the ultrasonic composers and the man more than any other responsible for Madame Gioconda's decline, was one of Mangon's regular calls. Usually Mangon swept his apartment once a week, calling at three in the afternoon. Today, however, he wanted to make sure of finding Alto before he left for Video City, where he was a director of programme music.

The houseboy let him in. He crossed the hall and made his way down the black glass staircase into the sunken lounge. Wide studio windows revealed an elegant panorama of park and midtown skyscrapers.

A white-slacked young man sitting on one of the long slab sofas—Paul Merrill, Alto's arranger—waved him back.

"Mangon, hold onto your dive breaks. I'm really on re-heat this morning." He twirled the ultrasonic trumpet he was playing, a tangle of stops and valves from which half a dozen leads trailed off across the cushions to a cathode tube and tone generator at the other end of the sofa.

Mangon sat down quietly and Merrill clamped the mouthpiece to his lips. Watching the ray tube intently, where he

could check the shape of the ultrasonic notes, he launched into a brisk allegretto sequence, then quickened and flicked out a series of brilliant arpeggios, stripping off high P and Q notes that danced across the cathode screen like frantic eels, fantastic glissandos that raced up twenty octaves in as many seconds. Each note was distinct and symmetrically exact, tripping off the tone generator to turn so that escalators of electronic chords interweaved the original scale, a multi-channel melodic stream that crowded the cathode screen with exquisite, flickering patterns. The whole thing was inaudible, but the air around Mangon felt vibrant and accelerated, charged with gaiety and sparkle, and he applauded generously when Merrill threw off a final dashing riff.

"*Flight of the Bumble Bee*," Merrill told him. He tossed the trumpet aside and switched off the cathode tube. He lay back and savoured the glistening air for a moment. "Well, how are things?"

Just then the door from one of the bedrooms opened and Ray Alto appeared, a tall, thoughtful man of about forty, with thinning blonde hair, wearing pale blue sunglasses over cool eyes.

"Hello, Mangon," he said, running a hand over Mangon's head. "You're early today. Full programme?" Mangon nodded. "Don't let it get you down." Alto picked a dictaphone off one of the end tables, carried it over to an armchair. "Noise, noise, noise—the greatest single disease vector of civilisation. The whole world's rotting with it, yet all they can afford is a few people like Mangon fooling around with sonovacs. It's hard to believe that only a few years ago people completely failed to realize that sound left any residues."

"Are we any better?" Merrill asked. "This month's *Transonics* claims that eventually unswept sonic resonances will build up to a critical point where they'll literally start shaking buildings apart. The entire city will come down like Jericho."

"Babel," Alto corrected. "Okay, now, let's shut up. We'll be gone soon, Mangon. Buy him a drink, would you, Paul?"

Merrill brought Mangon a coke from the bar, then wandered off. Alto flipped on the dictaphone, began to speak steadily into it. "Memo 7: Betty, when does the copyright on Stravinsky lapse? Memo 8: Betty, file melody for projected nocturne: L, L sharp, BB, Y flat, Q, VT, L, L sharp. Memo 9: Paul, the bottom three octaves of the ultra-tuba are within the audible spectrum of the canine ear—congrats on that SP of the *Anvil Chorus* last night; about three million dogs thought the roof had fallen in on them. Memo 10: Betty—" He broke off, put down the microphone. "Mangon, you look worried."

Mangon, who had been lost in reverie, pulled himself together and shook his head.

"Working too hard?" Alto pressed. He scrutinised Mangon suspiciously. "Are you still sitting up all night with that Gioconda woman?"

Embarrassed, Mangon lowered his eyes. His relationship with Alto was, obliquely, almost as close as that with Madame Gioconda. Although Alto was brusque and often irritable with Mangon, he took a sincere interest in his welfare. Possibly Mangon's muteness reminded him of the misanthropic motives behind his hatred of noise, made him feel indirectly responsible for the act of violence Mangon's mother had committed. Also, one artist to another, he respected Mangon's phenomenal auditory sensitivity.

"She'll exhaust you, Mangon, believe me." Alto knew how much the personal contact meant to Mangon and hesitated to be overcritical. "There's nothing you can do for her. Offering her sympathy merely fans her hopes for a comeback. She hasn't a chance."

Mangon frowned, wrote quickly on his wrist-pad:

She WILL sing again!

Alto read the note pensively. Then, in a harder voice, he said: "She's using you for her own purposes, Mangon. At present you satisfy one whim of hers—the neurotic headaches and fantasy applause. God forbid what the next whim might be."

She is a great artist.

"She was," Alto pointed out. "No more, though, sad as it is. I'm afraid that the times change."

Annoyed by this, Mangon gritted his teeth and tore off another sheet.

Entertainment, perhaps. Art, No!

Alto accepted the rebuke silently; he reproved himself as much as Mangon did for selling out to Video City. In his four years there his output of original ultrasonic music consisted of little more than one nearly finished symphony—aptly titled *Opus Zero*—shortly to receive its first performance, a few nocturnes and one quartet. Most of his energies went into programme music, prestige numbers for spectaculars and a mass of straight transcriptions of the classical repertoire. The last he particularly despised. It was fit work for Paul Merrill, but not for a responsible composer.

He added the sheet to the two in his left hand and asked: "Have you ever heard Madame Gioconda sing?"

Mangon's answer came back scornfully:

No! But you have. Please describe

Alto laughed shortly, tore up the sheets and walked across to the window.

"All right, Mangon, you've made your point. You're carrying a torch for art, doing your duty to one of the few perfect things the world has ever produced. I hope you're equal to the responsibility. La Gioconda might be quite a handful. Do you know that at one time the doors of Covent Garden, La Scala *and* the Met were closed to her? They said Callas had temperament, but she was a girl scout compared with Gioconda. Tell me, how is she? Eating enough?"

Mangon held up his coke bottle.

"Snow? That's tough. But how does she afford it?" He glanced at his watch. "Dammit, I've got to leave. Clean this place out thoroughly, will you? It gives me a headache just listening to myself think."

He started to pick up the dictaphone but Mangon was scribbling rapidly on his pad.

Give Madame Gioconda a job

Alto read the note, then gave it back to Mangon, puzzled. "Where? In this apartment?" Mangon shook his head. "Do you mean at V.C.? *Singing?*" When Mangon began to nod vigorously he looked up at the ceiling with a despairing groan "For heaven's sake, Mangon, the last vocalist sang at Video City over ten years ago. No audience would stand for it. If I even suggested such an idea they'd tear my contract into a thousand pieces." He shuddered, only half-playfully. "I don't know about you, Mangon, but I've got my ulcer to support."

He made his way to the staircase, but Mangon intercepted him, pencil flashing across the wrist-pad.

Please. Madame Gioconda will start blackmail soon. She is desperate. Must sing again. Could arrange make-believe programme in research studios. Closed circuit.

Alto folded the note carefully, left the dictaphone on the staircase and walked slowly back to the window.

"This blackmail. Are you absolutely sure Who, though, do you know?" Mangon nodded, but looked away. "Okay, I won't press you. LeGrande, probably, eh?" Mangon turned round in surprise, then gave an elaborate parody of a shrug.

"Hector LeGrande. Obvious guess. But there are no secrets there; it's all public knowledge. I suppose she's just threatening to make enough of an exhibition of herself to block his governorship." Alto pursed his lips. He loathed LeGrande, not merely for having bribed him into a way of life he could never renounce, but also because, once having exploited his weakness, LeGrande never hesitated to remind Alto of it,

treating him and his music with contempt. If Madame Gioconda's blackmail had the slightest hope of success he would have been only too happy, but he knew LeGrande would destroy her, would probably take Mangon too.

Suddenly he felt a paradoxical sense of loyalty for Madame Gioconda. He looked at Mangon, waiting patiently, big spaniel eyes wide with hope.

"The idea of a closed circuit programme is insane. Even if we went to all the trouble of staging it she wouldn't be satisfied. She doesn't want to sing, she wants to be a *star*. It's the trappings of stardom she misses—the cheering galleries, the piles of bouquets, the backstage parties. I could arrange a half-hour session on closed circuit with some trainee technicians—a few straight selections from *Tosca* and *Butterfly*, say, with even a sonic piano accompaniment—I'd be glad to play it myself—but I can't provide the gossip columns and theatre reviews. What would happen when she found out?"

She wants to SING

Alto reached out and patted Mangon on the shoulder. "Good for you. All right, then, I'll think about it. God knows how we'd arrange it. We'd have to tell her that she'll be making a surprise guest appearance on one of the big shows—that'll explain the absence of any programme announcement and we'll be able to keep her in an isolated studio. Stress the importance of surprise, to prevent her from contacting the newspapers . . . Where are you going?"

Mangon reached the staircase, picked up the dictaphone and returned to Alto with it. He grinned happily, his jaw working wildly as he struggled to speak. Strangled sounds quavered in his throat.

Touched, Alto turned away from him and sat down. "Okay, Mangon," he snapped brusquely, "you can get on with your job. Remember, I haven't promised anything." He flicked on the dictaphone, then began: "Memo 11: Ray . . ."

three

It was just after four o'clock when Mangon braked the sound truck in the alley behind the derelict station. Overhead the traffic hammered along the flyover, dinning down onto the cobbled walls. He had been trying to finish his rounds early enough to bring Madame Gioconda the big news before her headaches began. He had swept out the Oratory in an hour,

whirled through a couple of movie theatres, the Museum of Abstract Art, and a dozen private calls in half his usual time, driven by his almost overwhelming joy at having won a promise of help from Ray Alto.

He ran through the foyer, already fumbling at his wrist-pad. For the first time in many years he really regretted his muteness, his inability to tell Madame Gioconda orally of his triumph that morning.

Studio 2 was in darkness, the rows of seats and litter of old programmes and ice cream cartons reflected dimly in the single light masked by the tall flats. His feet slipped in some shattered plaster fallen from the ceiling and he was out of breath when he clambered up onto the stage and swung round the nearest flat.

Madame Gioconda had gone!

The stage was deserted, the couch a rumpled mess, a clutter of cold saucepans on the stove. The wardrobe door was open, dresses wrenched outwards off their hangars.

For a moment Mangon panicked, unable to visualise why she should have left, immediately assuming that she had discovered his plot with Alto.

Then he realized that never before had he visited the studio until midnight at the earliest, and that Madame Gioconda had merely gone out to the supermarket. He smiled at his own stupidity and sat down on the couch to wait for her, sighing with relief.

Suddenly the words struck him like the blows of a pole-axe!

As vivid as if they had been daubed in letters ten feet deep, they leapt out from the walls, nearly deafening him with their force.

"You grotesque old witch, you must be insane! You ever threaten me again and I'll have you destroyed! LISTEN, you pathetic—"

Mangon spun round helplessly, trying to screen his ears. The words must have been hurled out in a paroxysm of abuse. They were only an hour old, vicious sonic scars slashed across the immaculately swept walls.

His first thought was to rush out for the sonovac and sweep the walls clear before Madame Gioconda returned. Then it dawned on him that she had already heard the original of the echoes—in the background he could just detect the muffled rhythms and intonations of her voice.

All too exactly, he could identify the man's voice.

He had heard it many times before, raging in the same ruthless tirades, when, deputising for one of the sound-sweeps, he had swept out the main board room at Video City.

Hector LeGrande! So Madame Gioconda had been more desperate than he thought.

The bottom drawer of the dressing table lay on the floor, its contents upended. Propped against the mirror was an old silver portrait frame, dull and verdigrised, some cotton wool and a tin of cleansing fluid next to it. The photograph was one of LeGrande, taken twenty years earlier. She must have known LeGrande was coming and had searched out the old portrait, probably regretting the threat of blackmail.

But the sentiment had not been shared.

Mangon walked round the stage, his heart knotting with rage, filling his ears with LeGrande's taunts. He picked up the portrait, pressed it between his palms, and suddenly smashed it across the edge of the dressing table.

"Mangon!"

The cry rivetted him to the air. He dropped what was left of the frame, saw Madame Gioconda step quietly from behind one of the flats.

"Mangon, please," she protested gently. "You frighten me." She sidled past him towards the bed, dismantling an enormous purple hat. "And do clean up all that glass, or I shall cut my feet."

She spoke drowsily and moved in a relaxed, sluggish way that Mangon first assumed indicated acute shock. Then she drew from her handbag six white vials and lined them up carefully on the bedside table. These were her favourite confectionary—so LeGrande had sweetened the pill with another cheque. Mangon began to scoop the glass together with his feet, at the same time trying to collect his wits. The sounds of LeGrande's abuse dinned the air, and he broke away and ran off to fetch the sonovac.

Madame Gioconda was sitting on the edge of the bed when he returned, dreamily dusting a small bottle of bourbon which had followed the cocaine vials out of the handbag. She hummed to herself melodically and stroked one of the feathers in her hat.

"Mangon," she called when he had almost finished. "Come here."

Mangon put down the sonovac and went across to her.

She looked up at him, her eyes suddenly very steady. "Mangon, why did you break Hector's picture?" She held up a piece of the frame. "Tell me."

Mangon hesitated, then scribbled on his pad:

*I am sorry; I adore you very much. He said such
foul things to you*

Madame Gioconda glanced at the note, then gazed back

thoughtfully at Mangon. "Were you hiding here when Hector came?"

Mangon shook his head categorically. He started to write on his pad but Madame Gioconda restrained him.

"That's all right, dear. I thought not." She looked around the stage for a moment, listening carefully. "Mangon, when you came in could you hear what Mr. LeGrande said?"

Mangon nodded. His eyes flickered to the obscene phrases on the walls and he began to frown. He still felt Le Grande's presence and his attempt to humiliate Madame Gioconda.

Madame Gioconda pointed around them. "And you can actually hear what he said even now? How remarkable. Mangon, you have a wondrous talent."

I am sorry you have to suffer so much

Madame Gioconda smiled at this. "We all have our crosses to bear. I have a feeling you may be able to lighten mine considerably." She patted the bed beside her. "Do sit down, you must be tired." When he was settled she went on. "I'm very interested, Mangon. Do you mean you can distinguish entire phrases and sentences in the sounds you sweep? You can hear complete conversations hours after they have taken place?"

Something about Madame Gioconda's curiosity made Mangon hesitate. His talent, so far as he knew, was unique, and he was not so naive as to fail to appreciate its potentialities. It had developed in his late adolescence and so far he had resisted any temptation to abuse it. He had never revealed the talent to anyone, knowing that if he did his days as a sound-sweep would be over.

Madame Gioconda was watching him, an expectant smile on her lips. Her thoughts, of course, were solely of revenge. Mangon listened again to the walls, focussed on the abuse screaming out into the air.

Not complete conversations. Long fragments, up to twenty syllables. Depending on resonances and matrix. Tell no one. I will help you have revenge on LeGrande.

Madame Gioconda squeezed Mangon's hand. She was about to reach for the bourbon bottle when Mangon suddenly remembered the point of his visit. He leapt off the bed and started frantically scribbling on his wrist-pad.

He tore off the first sheet and pressed it into her startled hands, then filled three more, describing his encounter with the musical director at V.C., the latter's interest in Madame Gioconda and the conditional promise to arrange her guest appearance. In view of LeGrande's hostility he stressed the need for absolute secrecy.

He waited happily while Madame Gioconda read quickly through the notes, tracing out Mangon's childlike script with a long scarlet fingernail. When she finished he nodded his head rapidly and gestured triumphantly in the air.

Bemused, Madame Gioconda gazed uncomprehendingly at the notes. Then she reached out and pulled Mangon to her, taking his big faunlike head in her jewelled hands and pressing it to her lap.

"My dear child, how much I need you. You must never leave me now."

As she stroked Mangon's hair her eyes roved questingly around the walls.

The miracle happened shortly before eleven o'clock the next morning.

After breakfast, sprawled across Madame Gioconda's bed with her scrapbooks, an old gramophone salvaged by Mangon from one of the studios playing operatic selections, they had decided to drive out to the stockades—the sound-sweeps left for the city at nine and they would be able to examine the sonic dumps unmolested. Having spent so much time with Madame Gioconda and immersed himself so deeply in her world, Mangon was eager now to introduce Madame Gioconda to his. The stockades, bleak though they might be, were all he had to show her.

For Mangon, Madame Gioconda had now become the entire universe, a source of certainty and wonder as potent as the sun. Behind him his past life fell away like the discarded chrysalis of a brilliant butterfly, the grey years of his childhood at the orphanage dissolving into the magical kaleidoscope that revolved around him. As she talked and murmured affectionately to him, the drab flats and props in the studio seemed as brightly coloured and meaningful as the landscape of a mescaline fantasy. The air tingled with a thousand vivid echoes of her voice.

They set off down F Street at ten, and soon left behind the dingy warehouses and abandoned tenements that had enclosed Madame Gioconda for so long. Squeezed together in the driving cab of the sound truck they were an incongruous pair—the gangling Mangon, in zip-fronted yellow plastic jacket and yellow peaked cap, at the wheel, dwarfed by the vast flamboyant Madame Gioconda, wearing a parrot-green cartwheel hat and veil, her huge creamy breast glittering with pearls, gold stars and jewelled crescents, a small selection of the orders that had been showered upon her in her heyday.

She had breakfasted well, on one of the vials and a large glass of bourbon. As they left the city she gazed out amiably

at the fields stretching away from the highway, and trilled out a light recitative from *Figaro*.

Mangon listened to her happily, glad to see her in such good spirits. Determined to spend every possible minute with Madame Gioconda, he had decided to abandon his calls for the day, if not for the next week and month. With her he at last felt completely secure. The pressure of her hand and the warm swell of her shoulder made him feel confident and invigorated, all the more proud that he was able to help her back to fame.

He tapped on the windshield as they swung off the highway onto the narrow dirt track that led towards the stockades. Here and there among the dunes they could see the low ruined outbuildings of the old explosives plant, and the white galvanised iron roof of one of the sound-sweeps' cabins. Desolate and unfrequented, the dunes ran on for miles. They passed the remains of a gateway that had collapsed to one side of the road; originally a continuous fence had ringed the stockade, but no one had any reason for wanting to penetrate it. A place of strange echoes and festering silences, overhung by a gloomy miasma of a million compacted sounds, it remained remote and haunted, the graveyard of countless private bables.

The first of the sonic dumps appeared two or three hundred yards away on their right. This was reserved for aircraft sounds swept from the city's streets and municipal buildings, and was a tightly packed collection of sound-absorbent baffles covering several acres. The baffles were slightly larger than those in the other stockades; twenty feet high and fifteen wide, each supported by heavy wooden props, they faced each other in a random labyrinth of alleyways, like a stored lot of advertising billboards. Only the top two or three feet was visible above the dunes, but the changed air hit Mangon like a hammer, a pounding niagara of airlines blaring down the glideway, the piercing whistle of jets jockeying at take-off, the ceaseless mind-sapping roar that hangs like a vast umbrella over any metropolitan complex.

All around, odd sounds shaken loose from the stockades were beginning to reach them. Over the entire area, fed from the dumps below, hung an unbroken phonic high, invisible but nonetheless as tangible and menacing as an enormous black thundercloud. Occasionally, when supersaturation was reached after one of the summer holiday periods, the sonic pressure fields would split and discharge, venting back into the stockades a nightmarish cataract of noise, raining onto the sound-sweeps not only the howling of cats and dogs, but the multilunged tumult of cars, express trains, fairgrounds and aircraft, the cacophonic musique concrete of civilisation.

To Mangon the sounds reaching them, though scaled higher

in the register, were still distinct, but Madame Gioconda could hear nothing and felt only an overpowering sense of depression and irritation. The air seemed to grate and rasp. Mangon noticed her beginning to frown and hold her hand to her forehead. He wound up his window and indicated to her to do the same. He switched on the sonovac mounted under the dashboard and let it drain the discordancies out of the sealed cabin.

Madame Gioconda relaxed in the sudden blissful silence. A little further on, when they passed another stockade set closer to the road, she turned to Mangon and began to say something to him.

Suddenly she jerked violently in alarm, her hat toppling. Her voice had frozen! Her mouth and lips moved frantically, but no sounds emerged. For a moment she was paralysed. Clutching her throat desperately, she filled her lungs and screamed.

A faint squeak piped out of her cavernous throat, and Mangon swung round in alarm to see her gibbering apoplectically, pointing helplessly to her throat.

He stared at her bewildered, then doubled over the wheel in a convulsion of silent laughter, slapping his thigh and thumping the dashboard. He pointed to the sonovac, then reached down and turned up the volume.

"... aaauuuoooh," Madame Gioconda heard herself groan. She grasped her hat and secured it. "Mangon, what a dirty trick! You should have warned me."

Mangon grinned. The discordant sounds coming from the stockades began to fill the cabin again, and he turned down the volume. Gleefully, he scribbled on his wrist-pad:

Now you know what it is like!

Madame Gioconda opened her mouth to reply, then stopped in time, hiccupped and took his arm affectionately.

four

Mangon slowed down as they approached a side road. Two hundred yards away on their left a small pink-stuccoed cabin stood on a dune overlooking one of the stockades. They drove up to it, turned into a circular concrete apron below the cabin and backed up against one of the unloading bays, a battery of red-painted hydrants equipped with manifold gauges and release pipes running off into the stockade. This was only

twenty feet away at its nearest point, a forest of door-shaped baffles facing each other in winding corridors, like a set from a surrealist film.

As she climbed down from the truck Madame Gioconda expected the same massive wave of depression and overload that she had felt from the stockade of aircraft noises, but instead the air seemed brittle and frenetic, darting with sudden flashes of tension and exhilaration.

As they walked up to the cabin Mangon explained:

Party noises—company for me

The twenty or thirty baffles nearest the cabin he reserved for these, screening himself from the miscellaneous chatter that filled the rest of the stockade. When he woke in the mornings he would listen to the laughter and small talk, enjoy the gossip and wisecracks as much as if he had been at the parties himself.

The cabin was a single room with a large window overlooking the stockade, well insulated from the hubbub below. Madame Gioconda showed only a cursory interest in Mangon's meagre belongings, and after a few general remarks came to the point and went over to the window. She opened it slightly, listened experimentally to the stream of atmospheric shifts that crowded past her.

She pointed to the cabin on the far side of the stockade. "Mangon, whose is that?"

Gallagher's. My partner. He sweeps City Hall, University, V.C., big mansions on 5th and A. Working now.

Madame Gioconda nodded, and surveyed the stockade with interest. "How fascinating. It's like a zoo. All that talk, talk, talk. And *you* can hear it all." She snapped back her bracelets with swift decisive flicks of the wrist.

Mangon sat down on the bed. The cabin seemed small and dingy, and he was saddened by Madame Gioconda's disinterest. Having brought her all the way out to the dumps he wondered how he was going to keep her amused. Fortunately the stockade intrigued her. When she suggested a stroll through it he was only too glad to oblige.

Down at the unloading bay he demonstrated how he emptied the tanker, clipping the exhaust leads to the hydrant, regulating the pressure through the manifold and then pumping the sound away into the stockade.

Most of the stockade was in a continuous state of uproar, sounding something like a crowd in a football stadium, and as he led her out among the baffles he picked their way carefully through the quieter aisles. Around them voices chattered and whined fretfully and fragments of conversation drifted aimlessly over the air. Somewhere a woman pleaded in thin

nervous tones, a man grumbled to himself, another swore angrily, a baby bellowed. Behind it all was the steady background murmur of countless TV programmes, the easy patter of announcers, the endless monotones of racetrack commentators, the shrieking audiences of quiz shows, all pitched an octave up the scale so that they sounded like an eerie parody of themselves.

A shot rang out in the next aisle, followed by screams and shouting. Although she heard nothing, the pressure pulse made Madame Gioconda stop.

"Mangon, wait. Don't be in so much of a hurry. Tell me what they're saying."

Mangon selected a baffle and listened carefully. The sounds appeared to come from an apartment over a launderette. A battery of washing machines chuntered to themselves, a cash register slammed interminably, there was a dim, almost sub-threshold echo of 60-cycle hum from an SP record player.

He shook his head, waved Madame Gioconda on.

"Mangon, what did they say?" she pestered him. He stopped again, sharpened his ears and waited. This time he was more lucky. An overemotional female voice was gasping "... but if he finds you here he'll kill you, he'll kill us both. What shall we do . . ." He started to scribble down this outpouring, Madame Gioconda craning breathlessly over his shoulder, then recognised its source and screwed up the note.

"Mangon, for heaven's sake, what was it? Don't throw it away! Tell me!" She tried to climb under the wooden super-structure of the baffle to recover the note, but Mangon restrained her and quickly scribbled another message.

Adam and Eve. Sorry.

"What, the film? Oh, how ridiculous! Well, come on, try again."

Eager to make amends, Mangon picked the next baffle, one of a group serving the staff married quarters of the University. Always a difficult job to keep clean, he struck paydirt almost at once.

"... my God, there's Bartok all over the place, that damned Steiner woman, I'll swear she's sleeping with her . . ."

Mangon took it all down, passing the sheets to Madame Gioconda as soon as he covered them. Squinting hard at his crabbed handwriting, she gobbled them eagerly, disappointed when, after half a dozen, he lost the thread and stopped.

"Go on, Mangon, what's the matter?" She let the notes fall to the ground. "Difficult, isn't it? We'll have to teach you shorthand."

They reached the baffles Mangon had just filled from the previous day's rounds. Listening carefully, he heard Paul

Merrill's voice: ". . . month's *Transonics* claims that . . . the entire city will come down like Jericho."

He wondered if he could persuade Madame Gioconda to wait for fifteen minutes, when he would be able to repeat a few carefully edited fragments from Alto's promise to arrange her guest appearance, but she seemed eager to move deeper into the stockade.

"You said your friend Gallagher sweeps out Video City, Mangon. Where would that be?"

Hector LeGrande. Of course, Mangon realized. Why had he been so obtuse? This was the chance to pay the man back.

He pointed to an area a few aisles away. They climbed between the baffles, Mangon helping Madame Gioconda over the beams and props, steering her full skirt and wide hat brim away from splinters and rusted metal work.

The task of finding LeGrande was simple. Even before the baffles were in sight Mangon could hear the hard unyielding bite of the tycoon's voice, dominating every other sound from the Video City area. Gallagher in fact swept only the senior dozen or so executive suites at V.C., chiefly to relieve their occupants of the distasteful echoes of LeGrande's voice.

Mangon steered their way among these, searching for LeGrande's master suite, where anything of a really confidential nature took place.

There were about twenty baffles, throwing off an unending chorus of "Yes, H.L.," "Thanks, H.L.," "Brilliant, H.L." Two or three seemed strangely quiet, and he drew Madame Gioconda over to them.

This was LeGrande with his personal secretary and PA. He took out his pencil and focussed carefully.

". . . of Third National Bank, transfer two million to private holding and threatened claim for stock depreciation . . . redraft escape clauses, including nonliability purchase benefits . . ."

Madame Gioconda tapped his arm but he gestured her away. Most of the baffle appeared to be taken up by dubious financial dealings, but nothing that would really hurt LeGrande if revealed.

Then he heard—

". . . Bermuda Hilton. Private Island, with anchorage, have the beach cleaned up, last time the water was full of fish . . . I don't care, poison them, hang some nets out . . . Imogene will fly in from Idlewild as Mrs. Edna Burgess, warn customs to stay away . . ."

". . . call Cartier's, something for the Comtessa, 17 carats say, ceiling of ten thousand. No, make it eight thousand . . ."

". . . hat-check girl at the Tropicabana. Usual dossier . . ."

Mangon scribbled furiously, but LeGrande was speaking at

rapid dictation speed and he could get down only a few fragments. Madame Gioconda barely deciphered his handwriting, and became more and more frustrated as her appetite was whetted. Finally she flung away the notes in a fury of exasperation.

"This is absurd, you're missing everything!" she cried. She pounded on one of the baffles, then broke down and began to sob angrily. "Oh, God, God, *God*, how ridiculous! Help me, I'm going insane . . ."

Mangon hurried across to her and put his arms round her shoulders to support her. She pushed him away irritably, railing at herself to discharge her impatience. "It's useless, Mangon, it's stupid of me, I was a fool—"

"STOP!"

The cry split the air like the blade of a guillotine.

They both straightened and stared at each other blankly. Mangon put his fingers slowly to his lips, then reached out tremulously and put his hands in Madame Gioconda's. Somewhere within him a tremendous tension had begun to dissolve.

"Stop," he said again in a rough but quiet voice. "Don't cry. I'll help you."

Madame Gioconda gaped at him with amazement. Then she let out a tremendous whoop of triumph.

"Mangon, you can talk! You've got your voice back! It's absolutely astounding! Say something, quickly, for heaven's sake!"

Mangon felt his mouth again, ran his fingers rapidly over his throat. He began to tremble with excitement, his face brightened, he jumped up and down like a child.

"I can talk," he repeated wonderingly. His voice was gruff, then seesawed into a treble. "I can talk," he said, louder, controlling the pitch. "I can talk, I can talk, *I can talk!*" He flung his head back, let out an ear-shattering shout. "I CAN TALK! HEAR ME!" He ripped the wrist-pad off his sleeve and hurled it away over the baffles.

Madame Gioconda backed away, laughing agreeably. "We can hear you, Mangon. Dear me, how sweet." She watched Mangon thoughtfully as he cavorted happily in the narrow space between the aisles. "Now don't tire yourself out or you'll lose it again."

Mangon danced over to her, seized her shoulders and squeezed them tightly. He suddenly realized that he knew no diminutive or Christian name for her.

"Madame Gioconda," he said earnestly, stumbling over the syllables, the words that were so simple yet so enormously complex to pronounce. "You gave me back my voice. Any-

thing you want—" He broke off, stuttering happily, laughing through his tears. Suddenly he buried his head in her shoulder, exhausted by his discovery, and cried gratefully, "It's a *wonderful* voice."

Madame Gioconda steadied him maternally. "Yes, Mangon," she said, her eyes on the discarded notes lying in the dust. "You've got a wonderful voice, all right." *Sotto voce*, she added: "But your hearing is even more wonderful."

Paul Merrill switched off the SP player, sat down on the arm of the sofa and watched Mangon quizzically.

"Strange. You know, my guess is that it was psychosomatic."

Mangon grinned. "Psychosemantic," he repeated, garbling the word half-deliberately. "Clever. You can do amazing things with words. They help to crystallise the truth."

Merrill groaned playfully. "God, you sit there, you drink your coke, you philosophise. Don't you realize you're supposed to stand quietly in a corner, positively dumb with gratitude? Now you're even ramming your puns down my throat. Never mind, tell me again how it happened."

"Once a pun a time—" Mangon ducked the magazine Merrill flung at him, let out a loud "Olee!"

For the last two weeks he had been en fete.

Every day he and Madame Gioconda followed the same routine; after breakfast at the studio they drove out to the stockade, spent two or three hours compiling their confidential file on LeGrande, lunched at the cabin and then drove back to the city, Mangon going off on his rounds while Madame Gioconda slept until he returned shortly before midnight. For Mangon their existence was idyllic; not only was he rediscovering himself in terms of the complex spectra and patterns of speech—a completely new category of existence—but at the same time his relationship with Madame Gioconda revealed areas of sympathy, affection and understanding that he had never previously seen. If he sometimes felt that he was too preoccupied with his side of their relationship and the extraordinary benefits it had brought him, at least Madame Gioconda had been equally well served. Her headaches and mysterious phantoms had gone. She had cleaned up the studio and begun to salvage a little dignity and self-confidence, which made her single-minded sense of ambition seem less obsessive. Psychologically, she needed Mangon less now than he needed her, and he was careful to restrain his high spirits and give her plenty of attention. During the first week Mangon's incessant chatter had been rather wearing, and once, on their way to the stockade, she had switched on the sonovac in the driving cab

and left Mangon mouthing silently at the air like a stranded fish. He had taken the hint.

"What about the sound-sweeping?" Merrill asked. "Will you give it up?"

Mangon shrugged. "It's my talent, but living at the stockade, let in at back doors, cleaning up the verbal garbage—it's a degraded job. I want to help Madame Gioconda. She will need a secretary when she starts to go on tour."

Merrill shook his head warily. "You're awfully sure there's going to be a sonic revival, Mangon. But every sign is against it."

"They have not heard Madame Gioconda sing. Believe me, I know the power and wonder of the human voice. Ultrasonic music is great for atmosphere, but it has no content. It can't express ideas, only emotions."

"What happened to that closed circuit programme you and Ray were going to put on for her?"

"It—fell through," Mangon lied. The circuits Madame Gioconda would perform on would be open to the world. He had told them nothing of the visits to the stockade, of his power to read the baffles, of the accumulating file on LeGrande. Soon Madame Gioconda would strike.

Above them in the hallway a door slammed. Someone stormed through into the apartment in a tempest, kicking a chair against a wall. It was Alto. He raced down the staircase into the lounge, jaw tense, fingers flexing angrily.

"Paul, don't interrupt me until I've finished," he snapped, racing past without looking at them. "You'll be out of a job, but I warn you, if you don't back me up one hundred per cent I'll shoot you. That goes for you too, Mangon. I need you in on this." He whirled over to the window, bolted out the traffic noises below, then swung back and watched them steadily, feet planted firmly on the carpet. For the first time in the three years Mangon had known him he looked aggressive and confident.

"Headline," he announced. "The Gioconda is to sing again! Incredible and terrifying though the prospect may seem, exactly two weeks from now the live uncensored voice of the Gioconda will go out coast to coast on all three V.C. radio channels. Surprised, Mangon? It's no secret; they're printing the announcements right now. Eight-thirty to nine-thirty, right up on the peak, even if they have to give the time away."

Merrill sat forward. "Bully for her. If LeGrande wants to drive the whole ship into the ground, why worry?"

Alto punched the sofa viciously. "Because you and I are going to be on board! Didn't you hear me? Eight-thirty, two

weeks from today! *We* have a programme on then. Well, guess who our guest star is?"

Merrill struggled to make sense of this. "Wait a minute, Ray. You mean she's actually going to appear—she's going to sing—in the middle of *Opus Zero*?" Alto nodded grimly. Merrill threw up his hands and slumped back. "It's crazy. She can't. Who says she will?"

"Who do you think? The great LeGrande." Alto turned to Mangon. "She must have raked up some real dirt to frighten him into this. I can hardly believe it."

"But why on *Opus Zero*?" Merrill pressed. "Let's switch the premiere to the week after."

"Paul, you're missing the point. Let me fill you in. Sometime yesterday Madame Gioconda paid a private call on LeGrande. Something she told him persuaded him that it would be absolutely wonderful for her to have a whole hour to herself on one of the feature music programmes, singing a few old-fashioned songs from the old-fashioned shows, with a full-scale ultrasonic backing. Eager to give her a completely free hand, he even asked her which of the regular programmes she'd like. Well, as the last show she appeared on ten years ago was cancelled to make way for Ray Alto's *Total Symphony*, you can guess which one she picked."

Merrill nodded. "It all fits together. We're broadcasting from the concert studio. A single ultrasonic symphony, no station breaks, not even a commentary. Your first world premiere in three years. There'll be a big invited audience. White tie, something like the old days. Revenge is sweet." He shook his head sadly. "Hell, all that work."

Alto snapped: "Don't worry, it won't be wasted. Why should we pay the bill for LeGrande? This symphony is the one piece of serious music I've written since I joined V.C., and it isn't going to be ruined." He went over to Mangon, sat down next to him. "This afternoon I went down to the rehearsal studios. They'd found an ancient sonic grand somewhere and one of the old-timers was accompanying her. Mangon, it's ten years since she sang last. If she'd practised for two or three hours a day she might have preserved her voice, but you sweep her radio station, you know she hasn't sung a note. She's an old woman now. What time alone hasn't done to her, cocaine and self-pity have." He paused, watching Mangon searchingly. "I hate to say it, Mangon, but it sounded like a cat being strangled."

You lie, Mangon thought icily. *You are simply so ignorant, your taste in music is so debased, that you are unable to recognise real genius when you see it.* He looked at Alto with contempt, sorry for the man, with his absurd silent symphonies.

He felt like shouting: *I know what silence is! The voice of the Gioconda is a stream of gold, molten and pure. She will find it again as I found mine.* However, something about Alto's manner warned him to wait.

He said: "I understand." Then: "What do you want me to do?"

Alto patted him on the shoulder. "Good boy. Believe me, you'll be helping her in the long run. What I propose will save all of us from looking foolish. We've got to stand up to LeGrande even if it means a one-way ticket out of V.C. Okay, Paul?" Merrill nodded firmly and he went on: "Orchestra will continue as scheduled. According to the programme Madame Gioconda will be singing to an accompaniment by *Opus Zero*, but that means nothing and there'll be no connection at any point. In fact she won't turn up until the night itself. She'll stand well down-stage on a special platform, and the only microphone will be an aerial about twenty feet diagonally above her. It will be live—but *her voice will never reach it*. Because you, Mangon, will be in the cue-box directly in front of her, with the most powerful sonovac we can lay our hands on. As soon as she opens her mouth you'll let her have it. She'll be at least ten feet away from you so she'll hear herself and won't suspect what is happening."

"What about the audience?" Merrill asked.

"They'll be listening to my symphony, enjoying a neurophonic experience of sufficient beauty and power, I hope, to distract them from the sight of a blowzy prima donna gesturing to herself in a cocaine fog. They'll probably think she's conducting. Remember, they may be expecting her to sing, but how many people still know what the word really means? Most of them will assume its ultrasonic."

"And LeGrande?"

"He'll be in Bermuda. Business conference."

five

Madame Gioconda was sitting before her dressing table mirror, painting on a face like a Halloween mask. Beside her the gramophone played scratchy sonic selections from *Traviata*. The stage was still a disorganized jumble, but there was now an air of purpose about it.

Making his way through the flats, Mangon walked up to her quietly and kissed her bare shoulder. She stood up with a flourish, an enormous monument of a woman in a magnificent

black silk dress sparkling with thousands of sequins.

"Thank you, Mangon," she sang out when he complimented her. She swirled off to a hatbox on the bed, pulled out a huge peacock feather and stabbed it into her hair.

Mangon had come round at six, several hours earlier than usual; over the past two days he had felt increasingly uneasy. He was convinced that Alto was in error, and yet logic was firmly on his side. Could Madame Gioconda's voice have preserved itself? Her spoken voice, unless she was being particularly sweet, was harsh and uneven, recently even more so. He assumed that with only a week till her performance nervousness was making her irritable.

Again she was going out, as she had done almost every night. With whom, she never explained; probably to the theatre restaurants, to renew contacts with agents and managers. He would have liked to go with her, but he felt out of place on this plane of Madame Gioconda's existence.

"Mangon, I won't be back until very late," she warned him. "You look rather tired and pasty. You'd better go home and get some sleep."

Mangon noticed he was still wearing his yellow peaked cap. Unconsciously he must already have known he would not be spending the night there.

"Do you want to go to the stockade tomorrow?" he asked.

"Hmmmh . . . I don't think so. It gives me rather a headache. Let's leave it for a day or two."

She turned on him with a tremendous smile, her eyes glinting with sudden affection.

"Goodbye, Mangon, it's been wonderful to see you." She bent down and pressed her cheek maternally to his, engulfing him in a heady wave of powder and perfume. In an instant all his doubts and worries evaporated. He looked forward to seeing her the next day, certain that they would spend the future together.

For half an hour after she had gone he wandered around the deserted sound stage, going through his memories. Then he made his way out to the alley and drove back to the stockade.

As the day of Madame Gioconda's performance drew closer Mangon's anxieties mounted. Twice he had been down to the concert studio at Video City and had rehearsed with Alto his entry beneath the stage to the cue box, a small compartment off the corridor used by the electronics engineers. They had checked the power points, borrowed a sonovac from the services section—a heavy-duty model used for shielding VIP's and commentators at airports—and mounted its nozzle in the cue hood.

Alto stood on the platform erected for Madame Gioconda and shouted at the top of his voice at Merrill sitting in the third row of the orchestra section.

"Hear anything?" He called afterwards.

Merrill shook his head. "Nothing, no vibration at all."

Down below, Mangon flicked the release toggle, vented a long-drawn-out "Fiiivveeee! . . . Foouuurrr! . . . Threeeee! . . . Twooooo! . . . Onnnneee. . . !"

"Good enough," Alto decided. Chicago-style, they hid the sonovac in a triple-bass case and stored it in Alto's office.

"Do you want to hear her sing, Mangon?" Alto asked. "She should be rehearsing now."

Mangon hesitated, then declined.

"It's tragic that she's unable to realize the truth herself," Alto commented. "Her mind must be fixed fifteen or twenty years in the past, when she sang her greatest roles at La Scala. That's the voice she hears, the voice she'll probably always hear."

Mangon pondered this. Once he had tried to ask Madame Gioconda how her practice sessions were going, but she was moving into a different zone and answered with some grandiose remark. He was seeing less and less of her; whenever he visited the station she was either about to go out or else tired and eager to be rid of him. Their trips to the stockade had ceased. All this he accepted as inevitable; after the performance, he assured himself, after her triumph, she would come back to him.

He noticed, however, that he was beginning to stutter.

On the final afternoon, a few hours before the performance that evening, Mangon drove down to F Street for what was to be the last time. He had not seen Madame Gioconda the previous day and he wanted to be with her and give her any encouragement she needed.

As he turned into the alley he was surprised to see two large moving vans parked outside the station entrance. Four or five men were carrying out pieces of furniture and the great scenic flats from the sound stage.

Mangon ran over to them. One of the vans was full; he recognised all Madame Gioconda's possessions—the rococo wardrobe and dressing table, the couch, the huge Desdemona bed, up-ended and wrapped in corrugated paper. As he looked at it he felt that a section of himself had been torn from him and rammed away callously. In the bright daylight the peeling threadbare flats had lost all illusion of reality; with them Mangon's whole relationship with Madame Gioconda seemed to have been dismantled.

The last of the workmen came out with a gold cushion under his arm, tossed it into the second van. The foreman sealed the doors and waved on the driver.

"W . . wh . . where are you going?" Mangon asked him urgently.

The foreman looked him up and down. "You're the sweeper, are you?" He jerked a thumb towards the station. "The old girl said there was a message for you in there. Couldn't see one myself."

Mangon left him and ran into the foyer and up the stairway towards Studio 2. The removers had torn down the blinds and a grey light was flooding into the dusty auditorium. Without the flats the stage looked exposed and derelict.

He raced down the aisle, wondering why Madame Gioconda had decided to leave without telling him.

The stage had been stripped. The music stands had been kicked over, the stove lay on its side with two or three old pans around it. Underfoot there was a miscellaneous litter of paper, ash and empty vials.

Mangon searched around for the message, probably pinned to one of the partitions.

Then he heard it screaming at him from the walls, violent and concise.

"GO AWAY, YOU UGLY CHILD! NEVER TRY TO SEE ME AGAIN!"

He shrank back, involuntarily trying to shout as the walls seemed to fall in on him, but his throat had frozen.

As he entered the corridor below the stage shortly before eight-twenty, Mangon could hear the sounds of the audience arriving and making their way to their seats. The studio was almost full, a hubbub of well-heeled chatter. Lights flashed on and off in the corridor, and oblique atmospheric shifts cut through the air as the players on the stage tuned their instruments.

Mangon slid past the technicians manning the neurophonic rigs which supplied the orchestra, trying to make the enormous triple-bass case as inconspicuous as possible. They were all busy checking the relays and circuits, and he reached the cue-box and slipped through the door unnoticed.

The box was almost in darkness, a few rays of coloured light filtering through the pink and white petals of the chrysanthemums stacked over the hood. He bolted the door, then opened the case, lifted out the sonovac and clipped the snout into the cannister. Leaning forward, with his hands he pushed a small aperture among the flowers.

Directly in front of him he could see a velvet-lined platform,

equipped with a white metal rail to the centre of which a large floral ribbon had been tied. Beyond was the orchestra, disposed in a semicircle, each of the twenty members sitting at a small boxlike desk on which rested his instrument, tone generator and cathode tube. They were all present, and the light reflected from the ray screens threw a vivid phosphorescent glow onto the silver wall behind them.

Mangon propped the nozzle of the sonovac into the aperture, bent down, plugged in the lead and switched on.

Just before eight twenty-five someone stepped across the platform and paused in front of the cue-hood. Mangon crouched back, watching the patent leather shoes and black trousers move near the nozzle.

"Mangon!" he heard Alto snap. He craned forward, saw Alto eying him. Mangon waved to him and Alto nodded slowly, at the same time smiling to someone in the audience, then turned on his heel and took his place in the orchestra.

At eight-thirty a sequence of red and green lights signalled the start of the programme. The audience quieted, waiting while an announcer in an off-stage booth introduced the programme.

A master of ceremonies appeared on stage, standing behind the cue-hood, and addressed the audience. Mangon sat quietly on the small wooden seat fastened to the wall, staring blankly at the cannister of the sonovac. There was a round of applause, and a steady green light shone downwards through the flowers. The air in the cue-box began to sweeten; a cool motionless breeze eddied vertically around him as a rhythmic ultrasonic pressure wave pulsed past. It relaxed the confined dimensions of the box, and had a strange mesmeric tug that held his attention. Somewhere in his mind he realized that the symphony had started, but he was too distracted to pull himself together and listen to it consciously.

Suddenly, through the gap between the flowers and the sonovac nozzle, he saw a large white mass shifting about on the platform. He slipped off the seat and peered up.

Madame Gioconda had taken her place on the platform. Seen from below she seemed enormous, a towering cataract of glistening white satin that swept down to her feet. Her arms were folded loosely in front of her, fingers flashing with blue and white stones. He could only just glimpse her face, the terrifying witchlike mask turned in profile as she waited for some off-stage signal.

Mangon mobilised himself, slid his hand down to the trigger of the sonovac. He waited, feeling the steady subliminal music of Alto's symphony swell massively within him, its tempo

accelerating. Presumably Madame Gioconda's arranger was waiting for a climax at which to introduce her first aria.

Abruptly Madame Gioconda looked forward at the audience and took a short step to the rail. Her hands parted and opened, palms upward, her head moved back, her bare shoulders swelled.

The wave front pulsing through the cue-box stopped, then soared off in a continuous unbroken crescendo. At the same time Madame Gioconda thrust her head out and her throat muscles contracted powerfully.

As the sound burst from her throat Mangon's finger locked rigidly against the trigger guard. An instant later, before he could think, a shattering blast of sound ripped through his ears, followed by a slightly higher note that appeared to strike a hidden ridge halfway along its path, wavered slightly, then recovered and sped on, like an express train crossing lines.

Mangon listened to her numbly, hands gripping the barrel of the sonovac. The voice exploded in his brain, flooding every nexus of cells with its violence. It was grotesque, an insane parody of a classical soprano. Harmony, purity, cadence had gone. Rough and cracked, it jerked sharply from one high note to a lower, its breath intervals uncontrolled, sudden precipices of gasping silence which plunged through the volcanic torrent, dividing it into a loosely connected sequence of bravura passages.

He barely recognised what she was singing: the Toreador song from *Carmen*. Why she had picked this he could not imagine. Unable to reach its higher notes, she fell back on the swinging rhythm of the refrain, hammering out the rolling phrases with tosses of her head. After a dozen bars her pace slackened and she slipped into an extempore humming, then broke out of this into a final climatic assault.

Appalled, Mangon watched as two or three members of the orchestra stood up and disappeared into the wings. The others had stopped playing, were switching off their instruments and conferring with each other. The audience was obviously restive; Mangon could hear individual voices in the intervals when Madame Gioconda refilled her lungs.

Behind him someone hammered on the door. Startled, Mangon nearly tripped across the sonovac. Then he bent down and wrenched the plug out of its socket. Snapping open the two catches beneath the chassis of the sonovac, he pulled off the cannister to reveal the valves, amplifier and generator. He slipped his fingers carefully through the leads and coils, seized them as firmly as he could and ripped them out with a single motion. Tearing his nails, he stripped the printed circuit off the bottom of the chassis and crushed it between his hands.

Satisfied, he dropped the sonovac to the floor, listened for a moment to the caterwauling above, which was now being drowned by the mounting vocal opposition of the audience, then unlatched the door.

Paul Merrill, his bow tie askew, burst in. He gaped blankly at Mangon, at the blood dripping from his fingers and the smashed sonovac on the floor.

He seized Mangon by the shoulders, shook him roughly. "Mangon, are you crazy? What are you trying to do?"

Mangon attempted to say something, but his voice had died. He pulled himself away from Merrill and pushed past into the corridor.

Merrill shouted after him, "Mangon, help me fix this! Where are you going?" He got down on his knees, started trying to piece the sonovac together.

From the wings Mangon briefly watched the scene on the stage.

Madame Gioconda was still singing, her voice completely inaudible in the uproar from the auditorium. Half the audience were on their feet, shouting towards the stage and apparently remonstrating with the studio officials. All but a few members of the orchestra had left their instruments, and were sitting on their desks and watching Madame Gioconda in amazement.

The programme director, Alto and the master of ceremonies stood in front of her, banging on the rail and trying to attract her attention. But Madame Gioconda failed to notice them. Head back, eyes on the brilliant ceiling lights, hands gesturing majestically, she soared along the private causeways of sound that poured unrelentingly from her throat, a great white angel of discord on her homeward flight.

Mangon watched her sadly, then slipped away through the stagehands pressing around him. As he left the theatre by the stage door a small crowd was gathering by the main entrance. He flicked away the blood from his fingers, then bound his handkerchief round them.

He walked down the side street to where the sound truck was parked, climbed into the cab and sat still for a few minutes, looking out at the bright evening lights in the bars and shop-fronts.

Opening the dashboard locker, he hunted through it, pulled out an old wrist-pad, and clipped it into his sleeve.

In his ears the sounds of Madame Gioconda singing echoed like an insane banshee.

He switched on the sonovac under the dashboard, turned it full on, then started the engine and drove off into the night.

THE OVERLOADED MAN

Faulkner was slowly going insane.

After breakfast he waited impatiently in the lounge while his wife tidied up in the kitchen. She would be gone within two or three minutes, but for some reason he always found the short wait each morning almost unbearable. As he drew the Venetian blinds and readied the reclining chair on the veranda he listened to Julia moving about efficiently. In the same strict sequence she stacked the cups and plates in the dishwasher, slid the pot roast for that evening's dinner into the auto-cooker and selected the alarm, lowered the air-conditioner refrigerator and immersion heater settings, switched open the oil storage manifolds for the delivery tanker that afternoon, and retracted her section of the garage door.

Faulkner followed the sequence with admiration, counting off each successive step as the dials clicked and snapped.

You ought to be in B-52's, he thought, or in the control house of a petrochemicals plant. In fact Julia worked in the personnel section at the Clinic, and no doubt spent all day in the same whirl of efficiency, stabbing buttons marked 'Jones,' 'Smith,' and 'Brown,' shunting paraplegics to the left, para-noids to the right.

She stepped into the lounge and came over to him, the standard executive product in brisk black suit and white blouse.

"Aren't you going to the School today?" she asked.

Faulkner shook his head, played with some papers on the desk. "No, I'm still on creative reflection. Just for this week. Professor Harman thought I'd been taking too many classes and getting stale."

She nodded, looking at him doubtfully. For three weeks now he had been lying around at home, dozing on the veranda, and she was beginning to get suspicious. Sooner or later, Faulkner realised, she would find out, but by then he hoped

to be out of reach. He longed to tell her the truth, that two months ago he had resigned from his job as a lecturer at the Business School and had no intention of ever going back. She'd get a damn big surprise when she discovered they had almost expended his last pay cheque, might even have to put up with only one car. Let her work, he thought, she earns more than I did anyway.

With an effort Faulker smiled at her. *Get out!* his mind screamed, but she still hovered around him indecisively.

"What about your lunch? There's no—"

"Don't worry about me," Faulkner cut in quickly, watching the clock. "I gave up eating six months ago. You have lunch at the Clinic."

Even talking to her had become an effort. He wished they could communicate by means of notes; had even bought two scribble pads for this purpose. However, he had never quite been able to suggest that she use hers, although he did leave messages around for her, on the pretext that his mind was so intellectually engaged that talking would break up his thought trains.

Oddly enough, the idea of leaving her never seriously occurred to him. Such an escape would prove nothing. Besides, he had an alternative plan.

"You'll be all right?" she asked, still watching him warily.

"Absolutely," Faulkner told her, maintaining the smile. It felt like a full day's work.

Her kiss was quick and functional, like the automatic peck of some huge bottle-topping machine. The smile was still on his face as she reached the door. When she had gone he let it fade slowly, then found himself breathing again and gradually relaxed, letting the tension drain down through his arms and legs. For a few minutes he wandered blankly around the empty house, then made his way into the lounge again, ready to begin his serious work.

His programme usually followed the same course. First, from the centre drawer of his desk he took a small alarm clock, fitted with a battery and wrist strap. Sitting down on the veranda, he fastened the strap to his wrist, wound and set the clock and placed it on the table next to him, binding his arm to the chair so that there was no danger of dragging the clock onto the floor.

Ready now, he lay back and surveyed the scene in front of him.

Menninger Village, or the 'Bin' as it was known locally, had been built about ten years earlier as a self-contained housing unit for the graduate staff of the Clinic and their families. In all there were some sixty houses in the develop-

ment, each designed to fit into a particular architectonic niche, preserving its own identity from within and at the same time merging into the organic unity of the whole development. The object of the architects, faced with the task of compressing a great number of small houses into a four-acre site, had been, firstly to avoid producing a collection of identical hutches, as in most housing estates, and secondly, to provide a showpiece for a major psychiatric foundation which would serve as a model for the corporate living units of the future.

However, as everyone there had found out, living in the Bin was hell on earth. The architects had employed the so-called psycho-modular system—a basic L-design—and this meant that everything under- or overlapped everything else, the whole development was a sprawl of interlocking frosted glass, white rectangles and curves, at first glance exciting and abstract (*Life* magazine had done several glossy photographic treatments of the new 'living trends' suggested by the Village) but to the people within formless and visually exhausting. Most of the Clinic's senior staff had soon taken off, and the Village was now rented to anyone who could be persuaded to live there.

Faulkner gazed out across the veranda, separating from the clutter of white geometric shapes the eight other houses he could see without moving his head. On his left, immediately adjacent, were the Penzils, with the McPhersons on the right; the other six houses were directly ahead, on the far side of a muddle of interlocking garden areas, abstract rat-runs divided by waist-high white panelling, glass angle-pieces and slatted screens.

In the Penzil's garden was a collection of huge alphabet blocks, each three feet high, which their two children played with. Often they left messages out on the grass for Faulkner to read, sometimes obscene, at others merely gnomic and obscure. This morning's came into the latter category. The blocks spelled out:

STOP AND GO

Speculating on the total significance of this statement, Faulkner let his mind relax, his eyes staring blankly at the houses. Gradually their already obscured outlines began to merge and fade, and the long balconies and ramps partly hidden by the intervening trees became disembodied forms, like gigantic geometric units.

Breathing slowly, Faulkner steadily closed his mind, then

without any effort erased his awareness of the identity of the houses opposite.

He was now looking at a cubist landscape, a collection of random white forms below a blue backdrop, across which several powdery green blurs moved slowly backwards and forwards. Idly, he wondered what these geometric forms really represented—he knew that only a few seconds earlier they had constituted an immediately familiar part of his everyday existence—but however he rearranged them spatially in his mind, or sought their associations, they still remained a random assembly of geometric forms.

He had discovered this talent only about three weeks ago. Balefully eying the silent television set in the lounge one Sunday morning, he had suddenly realised that he had so completely accepted and assimilated the physical form of the plastic cabinet that he could no longer remember its function. It had required a considerable mental effort to recover himself and re-identify it. Out of interest he had tried out the new talent on other objects, found that it was particularly successful with overassociated ones such as washing machines, cars and other consumer goods. Stripped of their accretions of sales slogans and status imperatives, their real claim to reality was so tenuous that it needed little mental effort to obliterate them altogether.

The effect was similar to that of mescaline and other hallucinogens, under whose influence the dents in a cushion became as vivid as the craters of the moon, the folds in a curtain the ripples in the waves of eternity.

During the following weeks Faulkner had experimented carefully, training his ability to operate the cut-out switches. The process was slow, but gradually he found himself able to eliminate larger and larger groups of objects, the mass-produced furniture in the lounge, the overenamelled gadgets in the kitchen, his car in the garage—de-identified, it sat in the half-light like an enormous vegetable marrow, flaccid and gleaming; trying to identify it had driven him almost out of his mind. “What on earth could it *possibly* be?” he had asked himself helplessly, splitting his sides with laughter—and as the facility developed he had dimly perceived that here was an escape route from the intolerable world in which he found himself at the Village.

He had described the facility to Ross Hendricks, who lived a few houses away, also a lecturer at the Business School and Faulkner’s only close friend.

“I may actually be stepping out of time,” Faulkner speculated. “Without a time sense consciousness is difficult to

visualize. That is, eliminating the vector of time from the de-identified object frees it from all its everyday cognitive associations. Alternatively, I may have stumbled on a means of repressing the photo-associative centres that normally identify visual objects, in the same way that you can so listen to someone speaking your own language that none of the sounds has any meaning. Everyone's tried this at some time."

Hendricks had nodded. "But don't make a career out of it, though." He eyed Faulkner carefully. "You can't simply turn a blind eye to the world. The subject-object relationship is not as polar as Descartes' 'Cogito ergo sum' suggests. By any degree to which you devalue the external world so you devalue yourself. It seems to me that your real problem is to reverse the process."

But Hendricks, however sympathetic, was beyond helping Faulkner. Besides, it was pleasant to see the world afresh again, to wallow in an endless panorama of brilliantly coloured images. What did it matter if there was form but no content?

A sharp click woke him abruptly. He sat up with a jolt, fumbling with the alarm clock, which had been set to wake him at 11 o'clock. Looking at it, he saw that it was only 10:55. The alarm had not rung, nor had he received a shock from the battery. Yet the click had been distinct. However, there were so many servos and robots around the house that it could have been anything.

A dark shape moved across the frosted glass panel which formed the side wall of the lounge. Through it, into the narrow drive separating his house from the Penzils', he saw a car draw to a halt and park, a young woman in a blue smock climb out and walk across the gravel. This was Penzil's sister-in-law, a girl of about twenty who had been staying with them for a couple of months. As she disappeared into the house Faulkner quickly unstrapped his wrist and stood up. Opening the veranda doors, he sauntered down into the garden, glancing back over his shoulder.

The girl, Louise (he had never spoken to her) went to sculpture classes in the morning, and on her return regularly took a leisurely shower before going out onto the roof to sunbathe.

Faulkner hung around the bottom of the garden, flipping stones into the pond and pretending to straighten some of the pergola slats, then noticed that the McPhersons' 15-year-old son Harvey was approaching along the other garden.

"Why aren't you at school?" he asked Harvey, a gangling youth with an intelligent ferretlike face under a mop of brown hair.

"I should be," Harvey told him easily. "But I convinced

Mother I was overtense, and Morrison"—his father—"said I was ratiocinating too much." He shrugged. "Patients here are overpermissive."

"For once you're right," Faulkner agreed, watching the shower stall over his shoulder. A pink form moved about, adjusting taps, and there was the sound of water jetting.

"Tell me, Mr. Faulkner," Harvey asked. "Do you realise that since the death of Einstein in 1955 there hasn't been a single living genius? From Michelangelo, through Shakespeare, Newton, Beethoven, Goethe, Darwin, Freud and Einstein there's always been a living genius. Now for the first time in 500 years we're on our own."

Faulkner nodded, his eyes engaged. "I know," he said. "I feel damned lonely about it too."

When the shower was over he grunted to Harvey, wandered back to the veranda, and took up his position again in the chair, the battery lead strapped to his wrist.

Steadily, object by object, he began to switch off the world around him. The houses opposite went first. The white masses of the roofs and balconies he resolved quickly into flat rectangles, the lines of windows into small squares of colour like the grids in a Mondrian abstract. The sky was a blank field of blue. In the distance an aircraft moved across it, engines hammering. Carefully Faulkner repressed the identity of the image, then watched the slim silver dart move slowly away like a vanishing fragment from a cartoon dream.

As he waited for the engines to fade he was conscious of the sourceless click he had heard earlier that morning. It sounded only a few feet away, near the French window on his right, but he was too immersed in the unfolding kaleidoscope to rouse himself.

When the plane had gone he turned his attention to the garden, quickly blotted out the white fencing, the fake pergola, the elliptical disc of the ornamental pool. The pathway reached out to encircle the pool, and when he blanked out his memories of the countless times he had wandered up and down its length it reared up into the air like a terra-cotta arm holding an enormous silver jewel.

Satisfied that he had obliterated the Village and the garden, Faulkner then began to demolish the house. Here the objects around him were more familiar, highly personalised extensions of himself. He began with the veranda furniture, transforming the tubular chairs and glass-topped table into a trio of involuted green coils, then swung his head slightly and selected the TV set just inside the lounge on his right. It clung limply to its identity. Easily he unfocussed his mind and reduced the

brown plastic box, with its fake wooden veining, to an amorphous blur.

One by one he cleared the bookcase and desk of all associations, the standard lamps and picture frames. Like lumber in some psychological warehouse, they were suspended behind him in vacuo, the white armchairs and sofas like blunted rectangular clouds.

Anchored to reality only by the alarm mechanism clamped to his wrist, Faulkner craned his head from left to right, systematically obliterating all traces of meaning from the world around him, reducing everything to its formal visual values.

Gradually these too began to lose their meaning, the abstract masses of colour dissolving, drawing Faulkner after them into a world of pure psychic sensation, where blocks of ideation hung like magnetic fields in a cloud chamber . . .

With a shattering blast, the alarm rang out, the battery driving sharp spurs of pain into Faulkner's forearm. Scalp tingling, he pulled himself back into reality and clawed away the wrist strap, massaging his arm rapidly, then slapped off the alarm.

For a few minutes he sat kneading his wrist, re-identifying all the objects around him, the houses opposite, the gardens, his home, aware that a glass wall had been inserted between them and his own psyche. However carefully he focussed his mind on the world outside, a screen still separated them, its opacity thickening imperceptibly.

On other levels as well, bulkheads were shifting into place.

His wife reached home at 6:00, tired out after a busy intake day, annoyed to find Faulkner ambling about in a semistupor, the veranda littered with dirty glasses.

"Well, clean it up!" she snapped when Faulkner vacated his chair for her and prepared to take off upstairs. "Don't leave the place like this. What's the matter with you? Come on, *connect!*"

Cramming a handful of glasses together, Faulkner mumbled to himself and started for the kitchen, found Julia blocking the way out when he tried to leave. Something was on her mind. She sipped quickly at her martini, then began to throw out probes about the school. He assumed she had rung there on some pretext and had found her suspicions reinforced when she referred in passing to himself.

"Liaison is terrible," Faulkner told her. "Take two days off and no one remembers you work there." By a massive effort of concentration he had managed to avoid looking his wife in the face since she arrived. In fact, they had not

exchanged a direct glance for over a week. Hopefully he wondered if this might be getting her down.

Supper was slow agony. The smells of the auto-cooked pot roast had permeated the house all afternoon. Unable to eat more than a few mouthfuls, he had nothing on which to focus his attention. Luckily Julia had a brisk appetite and he could stare at the top of her head as she ate, let his eyes wander around the room when she looked up.

After supper, thankfully, there was television. Dusk blanked out the other houses in the Village, and they sat in the darkness around the set, Julia grumbling at the programmes.

"Why do we watch *every* night?" she asked. "It's a total time waster."

Faulkner gestured airily. "It's an interesting social document." Slumped down into the wing chair, hands apparently behind his neck, he could press his fingers into his ears, at will blot out the sounds of the programme. "Don't pay any attention to what they're saying," he told his wife. "It makes more sense." He watched the characters mouthing silently like demented fish. The close-ups in melodramas were particularly hilarious; the more intense the situation the broader was the farce.

Something kicked his knee sharply. He looked up to see his wife bending over him, eyebrows knotted together, mouth working furiously. Fingers still pressed to his ears, Faulkner examined her face with detachment, for a moment speculated whether to complete the process and switch her off as he had switched off the rest of the world earlier that day. When he did he wouldn't bother to set the alarm . . .

"Harry!" he heard his wife bellow.

He sat up with a start, the row from the set backing up his wife's voice.

"What's the matter? I was asleep."

"You were in a trance, you mean. For God's sake answer when I talk to you. I was saying that I saw Harriet Tizzard this afternoon." Faulkner groaned and his wife swerved on him. "I know you can't stand the Tizzards but I've decided we ought to see more of them . . ."

As his wife rattled on, Faulkner eased himself down behind the wings. When she was settled back in her chair he moved his hands up behind his neck. After a few discretionary grunts, he slid his fingers into his ears and blotted out her voice, then lay quietly watching the silent screen.

By 10 o'clock the next morning he was out on the veranda again, alarm strapped to his wrist. For the next hour he lay

back enjoying the disembodied forms suspended around him, his mind free of its anxieties. When the alarm woke him at 11:00 he felt refreshed and relaxed. For a few moments he was able to survey the nearby houses with the visual curiosity their architects had intended. Gradually, however, everything began to secrete its poison again, its overlay of nagging associations, and within ten minutes he was looking fretfully at his wrist watch.

When Louise Penzil's car pulled into the drive he disconnected the alarm and sauntered out into the garden, head down to shut out as many of the surrounding houses as possible. As he was idling around the pergola, replacing the slats torn loose by the roses, Harvey McPherson suddenly popped his head over the fence.

"Harvey, are you still around? Don't you ever go to school?"

"Well, I'm on this relaxation course of Mother's," Harvey explained. "I find the competitive context of the classroom is—"

"I'm trying to relax too," Faulkner cut it. "Let's leave it at that. Why don't you beat it?"

Unruffled, Harvey pressed on. "Mr. Faulkner, I've got a sort of problem in metaphysics that's been bothering me. Maybe you could help. The only absolute in space-time is supposed to be the speed of light. But as a matter of fact any estimate of the speed of light involves the component of time, which is subjectively variable—so, barn, what's left?"

"Girls," Faulkner said. He glanced over his shoulder at the Penzil house and then turned back moodily to Harvey.

Harvey frowned, trying to straighten his hair. "What are you talking about?"

"Girls," Faulkner repeated. "You know, the weaker sex, the distaff side."

"Oh, for Pete's sake." Shaking his head, Harvey walked back to his house, muttering to himself.

That'll shut you up, Faulkner thought. He started to scan the Penzils' house through the slates of the pergola, then suddenly spotted Harry Penzil standing in the centre of his veranda window, frowning out at him.

Quickly Faulkner turned his back and pretended to trim the roses. By the time he managed to work his way indoors he was sweating heavily. Harry Penzil was the sort of man liable to straddle fences and come out leading with a right swing.

Mixing himself a drink in the kitchen, Faulkner brought it out onto the veranda and sat down, waiting for his embarrassment to subside before setting the alarm mechanism.

He was listening carefully for any sounds from the Penzils'

when he heard a familiar soft metallic click from the house on his right.

Faulkner sat forward, examining the veranda wall. This was a slab of heavy frosted glass, completely opaque, carrying white roof timbers, clipped onto which were slabs of corrugated polythene sheeting. Just beyond the veranda, screening the proximal portions of the adjacent gardens, was a ten-foot-high metal lattice extending about twenty feet down the garden fence and strung with japonica.

Inspecting the lattice carefully, Faulkner suddenly noticed the outline of a square black object on a slender tripod propped up behind the first vertical support just three feet from the open veranda window, the disc of a small glass eye staring at him unblinkingly through one of the horizontal slots.

A camera! Faulkner leapt out of his chair, gaping incredulously at the instrument. For days it had been clicking away at him. God alone knew what glimpses into his private life Harvey had recorded for his own amusement.

Anger boiling, Faulkner strode across to the lattice, pried one of the metal members off the support beam and seized the camera. As he dragged it through the space the tripod fell away with a clatter and he heard someone on the McPhersons' veranda start up out of a chair.

Faulkner wrestled the camera through, snapping off the remote control cord attached to the shutter lever. Opening the camera, he ripped out the film, then put it down on the floor and stamped its face in with the heel of his shoe. Then, ramming the pieces together, he stepped forward and hurled them over the fence towards the far end of the McPhersons' garden.

As he returned to finish his drink the phone rang in the hall.

"Yes, what is it?" he snapped into the receiver.

"Is that you, Harry? Julia here."

"Who?" Faulkner said, not thinking. "Oh, yes. Well, how are things?"

"Not too good, by the sound of it." His wife's voice had become harder. "I've just had a long talk with Professor Harman. He told me that you resigned from the school two months ago. Harry, what are you playing at? I can hardly believe it."

"I can hardly believe it either," Faulkner retorted jocularly. "It's the best news I've had for years. Thanks for confirming it."

"Harry!" His wife was shouting now. "Pull yourself together! If you think I'm going to support you you're very much mistaken. Professor Harman said—"

"That idiot Harman!" Faulkner interrupted. "Don't you realise he was trying to drive me insane?" As his wife's voice rose to an hysterical squawk he held the receiver away from him, then quietly replaced it in the cradle. After a pause he took it off again and laid it down on the stack of directories.

Outside, the spring morning hung over the Village like a curtain of silence. Here and there a tree stirred in the warm air, or a window opened and caught the sunlight, but otherwise the quiet and stillness were unbroken.

Lying on the veranda, the alarm mechanism discarded on the floor below his chair, Faulkner sank deeper and deeper into his private reverie, into the demolished world of form and colour which hung motionlessly around him. The houses opposite had vanished, their places taken by long white rectangular bands. The garden was a green ramp at the end of which poised the silver ellipse of the pond. The veranda was a transparent cube, in the centre of which he felt himself suspended like an image floating on a sea of ideation. He had obliterated not only the world around him, but his own body, and his limbs and trunk seemed an extension of his mind, disembodied forms whose physical dimensions pressed upon it like a dream's awareness of its own identity.

Some hours later, as he rotated slowly through his reverie, he was aware of a sudden intrusion into his field of vision. Focussing his eyes, with surprise he saw the dark-suited figure of his wife standing in front of him, shouting angrily and gesturing with her handbag.

For a few minutes Faulkner examined the discrete entity she familiarly presented, the proportions of her legs and arms, the planes of her face. Then, without moving, he began to dismantle her mentally, obliterating her literally limb by limb. First he forgot her hands, forever snapping and twisting like frenzied birds, then her arms and shoulders, erasing all his memories of their energy and motion. Finally, as it pressed closer to him, mouth working wildly, he forgot her face, so that it presented nothing more than a blunted wedge of pink-grey dough, deformed by various ridges and grooves, split by apertures that opened and closed like the vents of some curious bellows.

Turning back to the silent dreamscape, he was aware of her jostling insistently behind him. Her presence seemed ugly and formless, a bundle of obtrusive angles.

Then at last they came into brief physical contact. Gesturing her away, he felt her fasten like a dog upon his arm. He tried to shake her off but she clung to him, jerking about in an outpouring of anger.

Her rhythms were sharp and ungainly. To begin with he tried to ignore them; then he began to restrain and smooth her, moulding her angular form into a softer and rounder one.

As he worked away, kneading her like a sculptor shaping clay, he noticed a series of crackling noises, over which a persistent scream was just barely audible. When he finished he let her fall to the floor, a softly squeaking lump of spongy rubber.

Faulkner returned to his reverie, re-assimilating the unaltered landscape. His brush with his wife had reminded him of the one encumbrance that still remained—his own body. Although he had forgotten its identity it nonetheless felt heavy and warm, vaguely uncomfortable, like a badly made bed to a restless sleeper. What he sought was pure ideation, the undisturbed sensation of psychic being untransmuted by any physical medium. Only thus could he escape the nausea of the external world.

Somewhere in his mind an idea suggested itself. Rising from his chair, he walked out across the veranda, unaware of the physical movements involved, but propelling himself towards the far end of the garden.

Hidden by the rose pergola, he stood for five minutes at the edge of the pond, then stepped into the water. Trousers billowing around his knees, he waded out slowly. When he reached the centre he sat down, pushing the weeds apart, and lay back in the shallow water.

Slowly he felt the puttylike mass of his body dissolving, its temperature growing cooler and less oppressive. Looking out through the surface of the water six inches above his face, he watched the blue disc of the sky, cloudless and undisturbed, expanding to fill his consciousness. At last he had found the perfect background, the only possible field of ideation, an absolute continuum of existence uncontaminated by material excrescences.

Steadily watching it, he waited for the world to dissolve and set him free.

ZONE OF TERROR

Larsen had been waiting all day for Bayliss, the psychologist who lived in the next chalet, to pay the call he had promised on the previous evening. Characteristically, Bayliss had made no precise arrangements as regards time; a tall, moody man with an off-hand manner, he had merely gestured vaguely with his hypo and mumbled something about the following day: he would look in, probably. Larsen knew damned well he would look in, the case was too interesting to miss, in an oblique way it meant as much to Bayliss as it did to himself.

Except that it was Larsen who had to do the worrying—by three that afternoon Bayliss had still not materialised. What was he doing except sit in his white-walled, air-conditioned lounge, playing Bartok quartets on the stereogram? Meanwhile Larsen had nothing to do but roam around the chalet, slamming impatiently from one room to the next like a tiger with an anxiety neurosis, and cook up a quick lunch (coffee and three amphetamines, from a private cache Bayliss as yet only dimly suspected. God, he needed the stimulants after those massive barbiturate shots Bayliss had pumped into him after the attack). He tried to settle down with Kretschmer's *An Analysis of Psychotic Time*, a heavy tome, full of graphs and tabular material, which Bayliss had insisted he read, asserting that it filled in necessary background to the case. Larsen had spent a couple of hours on it, but so far he had got no further than the preface to the edition.

Periodically he went over to the window and peered through the plastic vanes of the blind for any signs of movement in the next chalet. Beyond, the desert lay in the sunlight like an enormous bleached bone, against which the flaring, aztec-red tail fins of Bayliss's Pontiac glittered like a flamboyant phoenix. The remaining three chalets were empty; the com-

plex was operated by the electronics company for which he and Bayliss worked as a sort of 're-creational' centre for senior executives and tired think-men. The desert site had been chosen for its hypotensive virtues, its supposed equivalence to psychic zero. Two or three days of leisurely reading, of thoughtfully watching the motionless horizons, and the neuronics grids re-aligned, tension and anxiety thresholds rose to more useful levels, creative and decisional activity heightened.

However, two days there, Larsen reflected, and he had very nearly gone mad. It was lucky Bayliss had been around, with his handy hypo. Though the man was certainly casual when it came to supervising his patients; he left them to their own resources. In fact, looking back, he—Larsen—had been responsible for just about all the diagnosis. Bayliss had done little more than thumb his hypo, toss Kretschmer into his lap, and offer some cogitating asides.

Perhaps he was waiting for something?

Larsen tried to decide whether to phone Bayliss on some pretext; his number—O, on the internal system—was almost too inviting. Then he heard a door clatter outside, leapt to the window and saw the tall, angular frame of the psychologist crossing the concrete apron between the chalets, head bowed pensively in the sharp sunlight, hands in pockets.

Where's his valise, Larsen thought, almost disappointed. Don't tell me he's putting on the barbiturate brakes. Maybe he'll try hypnosis. Masses of posthypnotic suggestions, in the middle of shaving I'll suddenly stand on my head.

He let Bayliss in, fidgetting around him as they went into the lounge.

"Where the hell have you been?" he asked. "Do you realize it's nearly four?"

Bayliss sat down at the miniature executive desk in the middle of the lounge and looked round critically, a ploy Larsen resented but never managed to anticipate.

"Of course I realize it. I'm fully wired for time." Letting this pass, he went on: "How have you felt today? No residues at all? Vision, memory, functional apparatus okay?" He pointed to the straight-backed chair placed in the interviewee's position at the desk's left-hand corner. "Sit down and try to relax."

Larsen gestured irritably. "How can I relax while I'm just hanging around here, waiting for the next bomb to go off?" He began his analysis of the past twenty-four hours, a task he enjoyed, larding the case history with liberal doses of speculative commentary.

"Actually, last night was easier. I think I'm entering a new zone. Everything's beginning to stabilise, lose that edgy feel. I'm not looking over my shoulder all the time. I've left the inside doors open, and before I enter a room I deliberately anticipate it, try to extrapolate its depth and dimensions so that it doesn't *surprise* me—before I used to open a door and just dive through like a man stepping into an empty lift shaft."

Larsen paced up and down, cracking his knuckles. Eyes half closed, Bayliss watched him steadily. "I'm pretty sure there won't be another attack," Larsen continued. "In fact, the best thing is probably for me to get straight back to the plant. After all, there's no point in sitting around here indefinitely. I feel more or less completely okay."

Bayliss nodded slowly. "In that case, then, why are you so jumpy?"

Exasperated, Larsen clenched his fists. He could almost hear the artery thudding angrily in his temple. "I'm *not* jumpy! For God's sake, Bayliss, I thought the advanced view was that psychiatrist and patient shared the illness together, forgot their own identities and took equal responsibility. You're trying to slide out—"

"I am not," Bayliss cut in firmly. "I accept complete responsibility for you. That's why I want you to stay here until you've come to terms with this thing."

Larsen snorted. "'Thing'! Now you're trying to make it sound like something out of a horror movie. All I had was a simple hallucination. And I'm not even completely convinced it was that." He pointed through the window. "Suddenly opening the garage door in that bright sunlight—it might have been just a shadow."

"You described it pretty exactly," Bayliss commented. "Colour of the hair, moustache, the clothes he wore."

"Back projection. The detail in dreams is authentic too." Larsen moved the chair out of the way and leaned forwards across the desk. "Another thing. I don't feel you're being entirely frank."

Their eyes levelled. Bayliss studied Larsen carefully for a moment, noticing his widely dilated pupils, then looked away.

"Well?" Larsen pressed.

Bayliss stood up, buttoned his jacket and walked across to the door. "I'll call in tomorrow. Meanwhile try to unwind yourself a little. I'm not trying to alarm you, Larsen, but this problem may be rather more complicated than you imagine." He nodded, then slipped out before Larsen could reply.

Larsen stepped over to the window, through the blind watched the psychologist disappear into his chalet. Disturbed

for a moment, the sunlight again settled itself heavily over everything. A few minutes later the sounds of one of the Bartok quartets whined fretfully across the apron.

Larsen went back to the desk and sat down, elbows thrust forwards aggressively. Bayliss irritated him, with his neurotic music and inaccurate diagnoses, and he felt tempted to climb straight into his car and drive back to the plant. Strictly speaking, though, the psychologist outranked Larsen, and probably had executive authority over him while he was at the chalet, particularly as the five days he had spent there were on the company's time.

He gazed round the silent lounge, tracing the cool horizontal shadows that dappled the walls, listening to the low soothing hum of the air-conditioner. His argument with Bayliss had refreshed him and he felt composed and confident. Yet shallow residues of tension and uneasiness still existed, and he found it difficult to keep his eyes off the open doors to the bedroom and kitchen.

He had arrived at the chalet five days earlier, exhausted and overwrought, on the verge of a total neuronic collapse. For three months he had been working without a break on programming the complex circuitry of a huge brain simulator which the company's Advanced Designs Division were building for one of the big psychiatric foundations. This was a complete electronic replica of the central nervous system, each spinal level represented by a single computer, other computers holding massive memory banks in which sleep, tension, aggression and other psychic functions were coded and stored, building blocks that could be played into the CNS simulator to construct models of dissociation states and withdrawal syndromes—any psychic complex on demand.

The design teams working on the simulator had been watched vigilantly by Bayliss and his assistants, and the weekly tests had revealed the mounting load of fatigue and worry that Larsen was carrying. Finally Bayliss had pulled him off the switchback and sent him out to the desert for two or three days' recuperation.

Larsen had been glad to get away. For the first two days he had lounged aimlessly around the deserted chalets, pleasantly fuddled by the barbiturates Bayliss prescribed, gazing out across the white deck of the desert floor, going to bed by eight and sleeping until noon. Every morning the caretaker had driven in from the town nearby to clean up and leave the groceries and menu slips, but Larsen never saw her; and he was only too glad to be alone. Deliberately seeing no one, allowing the natural rhythms of his mind to re-establish themselves, he knew he would soon recover.

In fact, though, the first person he had seen had suddenly stepped up to him straight out of a nightmare.

Larsen still looked back on the encounter with a shudder. After lunch on his third day at the chalet he had decided to drive out into the desert and examine an old quartz mine in one of the canyons. This was a two-hour trip and he had made up a thermos of iced martini and stowed it in the back seat. The garage was adjacent to the chalet, set back from the kitchen side entrance, and fitted with a roll steel door that lifted vertically and curved up under the roof.

Larsen had locked the chalet behind him, then raised the garage door and driven his car out onto the apron. Going back for the thermos which he had left on the bench at the rear of the garage, he had noticed a full jerrican of gas in the shadows against one corner. For a moment he paused, adding up his mileage, and decided to take the can with him. He carried it over to the car, then turned round to close the garage door.

The roll had failed to retract completely when he had first raised it, and reached down to the level of his chin. Putting his weight on the handle, Larsen managed to move it down a few inches, but the inertia was too much for him. The sunlight reflected in the steel panels was dazzling his eyes. Pressing his palms under the door, he jerked it upwards slightly to gain more momentum on the downward swing.

The space was small, no more than six inches, but it was just enough for him to see into the darkened garage.

Hiding in the shadows against the back wall near the bench was the indistinct but nonetheless unmistakable figure of a man. He stood motionless, arms loosely at his sides, watching Larsen. He wore a light cream suit—covered by patches of shadow that give him a curious fragmentary look—a neat blue sportshirt and two-tone shoes. He was stockily built, with a thick brush moustache, a plump face, and eyes that stared steadily at Larsen but somehow seemed to be focussed beyond him.

Still holding the door with both hands, Larsen gaped at the man blankly. Not only was there no means by which he could have entered the garage—there were no windows or side doors—but there was something definitely menacing about his stance.

Larsen was about to call to him when the man suddenly moved forward and stepped straight out of the shadows towards him.

Aghast, Larsen backed away. The dark patches across the

man's suit were not shadows at all, but the outline of the work bench directly behind him.

The man's body and clothes were transparent. He was a living zombie!

Galvanised into life, Larsen choked off his scream, seized the garage door and hurled it down. He dived at the lock, snapped the bolt in and jammed it closed with both hands, knees pressed against it desperately.

Half paralysed by cramp and barely breathing, suit soaked in sweat, he was still holding the door down when Bayliss drove up thirty minutes later.

Larsen drummed his fingers irritably on the desk, stood up and went into the kitchen. Cut off from the barbiturates they had been intended to counteract, the three amphetamines had begun to make him feel restless and overstimulated. He switched the coffee percolator on and then off, prowled back to the lounge and sat down on the sofa with a copy of Kretschmer.

He read a few pages, increasingly impatient. What light Kretschmer threw on his problem was hard to see; most of the case histories described deep schizos and irreversible paranoids. His own problem was much more superficial, a momentary aberration due to overloading. Why wouldn't Bayliss see this? For some reason he seemed to be unconsciously wishing for a major crisis, probably because he, the psychologist, secretly wanted to become the patient.

Larsen tossed the book aside, looked out through the window at the desert. Suddenly the chalet seemed dark and cramped, a claustrophobic focus of suppressed aggressions. He stood up, strode over to the door and stepped out into the clear open air.

Grouped in a loose semicircle, the chalets seemed to sink towards the ground as he strolled to the rim of the concrete apron a hundred yards away. The mountains behind loomed up enormously. It was late afternoon, on the edge of dusk, and the sky was a vivid vibrant blue, highlighted by the deepening colours of the desert floor, overlaid by the huge lanes of shadow that reached from the mountains against the sun-line. Larsen turned and looked back at the chalets. There was no sign of movement, other than a faint discordant echo of the atonal music Bayliss was playing, and the whole scene seemed suddenly unreal.

Reflecting on this, Larsen felt something shift inside his mind. The sensation was undefined, like an expected cue that had failed to materialise, a forgotten intention. He tried

to recall it, unable to remember whether he had switched on the coffee percolator.

He walked back to the chalets, noticing that he had left the kitchen door open. As he passed the lounge window on his way to close it he glanced in over his shoulder.

A man was sitting on the sofa, legs crossed, face hidden by the volume of Kretschmer. For a moment Larsen assumed that Bayliss had called in to see him, and walked on, deciding to make coffee for them both. Then he noticed that the stereogram was still playing in Bayliss' chalet.

Picking his steps carefully, he moved back to the lounge window and craned round it cautiously. The man's face was still hidden, but a single glance confirmed that the visitor was not Bayliss. He was wearing the same cream suit Larsen had seen two days earlier, the same two-tone shoes. But this time the man was no hallucination; his hands and clothes were solid and palpable. He shifted about on the sofa, denting one of the cushions, and turned a page of the book, flexing the spine between his hands.

Pulse thickening, Larsen watched him carefully, bracing himself against the window ledge. Something about the man, his posture, the way he held his hands, convinced him that he had seen him before their fragmentary encounter in the garage.

Then the man lowered the book and threw it onto the seat beside him. He sat back and looked through the window, his focus only a few inches from Larsen's face.

Mesmerised, Larsen stared back at him. He recognised the man without doubt, the pudgy face, the nervous eyes, the too thick moustache. Now at last he could see him clearly and realised he knew him only too well, better than anyone else on Earth.

The man was himself

Bayliss clipped the hypodermic into his valise, placed it on the lid of the stereogram.

"Hallucination is the wrong term altogether," he told Larsen, who was lying stretched out on Bayliss' sofa, sipping weakly at a glass of hot whisky. "Stop using it. A psycho-retinal image of remarkable strength and duration, but not an hallucination."

Larsen gestured feebly. He had stumbled into Bayliss' chalet an hour earlier, literally beside himself with fright. Bayliss had calmed him down, then dragged him back across the apron to the lounge window, made him accept that his double was gone. Bayliss wasn't in the least surprised at the identity of the phantom, and this worried Larsen almost as

much as the actual hallucination. What else was Bayliss hiding up his sleeve?

"I'm surprised you didn't realise it sooner yourself," Bayliss remarked. "Your description of the man in the garage was so obvious—the same cream suit, the same shoes and shirt, let alone the exact physical similarity, even down to your moustache."

Recovering a little, Larsen sat up. He smoothed down his cream gaberdine suit, brushed the dust off his brown and white shoes. "Thanks for warning me. All you've got to do now is tell me who he is."

Bayliss sat down in one of the chairs. "What do you mean, who he is? He's you, of course."

"I know that, but why, where does he come from? God, I must be going insane."

Bayliss snapped his fingers. "No you're not. Pull yourself together. This is a purely functional disorder, like double vision or amnesia; nothing more serious. If it was, I'd have pulled you out of here long ago. Perhaps I should have done that anyway, but I think we can find a quick safe way out of the image maze you're in."

He took a notebook out of his breast pocket. "Let's have a look at what we've got. Now, two features stand out above all others. First, the phantom is yourself. There's no doubt about that; he's an exact replica of you. More important, though, he is you as you are now, your exact contemporary in time, unidealised, un mutilated, with no compensation devices working at all. He isn't the shining youthful hero of the super-ego, or the haggard greybeard of the death wish. He is simply a photographic double. Displace one eyeball gently with your finger and you'll see a double of me. Your double is no more unusual, with the exception that the displacement is not in space but in time. You see, the second thing I noticed about your garbled description of this phantom was that, not only was he a photographic double, but he was doing exactly what you yourself had been doing a few minutes previously. The man in the garage was standing by the workbench, just where you stood when you were wondering whether to take the jerrican of gas. Again, the man reading in the armchair was merely repeating exactly what you had been doing with the same book, five minutes earlier. He even stared out of the window as you say you did before going out for a stroll."

Larsen nodded slowly, sipping a whisky. "You're suggesting, then, that the hallucination was nothing more than a sort of mental flashback?"

"Precisely. The stream of retinal images reaching the optic

lobe is nothing more than a film strip. Every image is stored away, thousands of reels, a hundred thousand hours of running time. Usually flashbacks are deliberate, when we consciously select a few blurry stills from the film library, a childhood scene, the image of our neighbourhood streets we carry around with us all day near the surface of consciousness. But upset the projector slightly—overstrain could do it—suddenly jolt it back a few hundred frames, and you'll superimpose a completely irrelevant strip of already exposed film, in your case a glimpse of yourself sitting on the sofa. It's the apparent irrelevancy that is so frightening."

Larsen gestured with his glass. "Wait a minute, though. When I was sitting on the sofa reading Kretschmer I didn't actually see myself, any more than I can see myself now. So where did the superimposed images come from?"

Bayliss put away his notebook. "Don't take the analogy of the film strip too literally. You may not see yourself sitting on that sofa, but your awareness of being there is just as powerful as visual corroboration. It's the multi-channel stream of tactile, positional and psychic images that form the real data store. Very little extrapolation is needed to transpose the observer's eye a few yards to the other side of a room. Purely visual memories are never completely accurate anyway."

"How do you explain why the man I saw in the garage was transparent?"

"Quite simply. The process was only just beginning, the intensity of the image was weak. The one you saw this afternoon was much stronger. I cut you off barbiturates deliberately, knowing full well that those stimulants you were taking on the sly would really trigger something if they were allowed to operate unopposed."

He went over to Larsen, took his glass and refilled it from the decanter. "But let's think of the future. The most interesting aspect of all this is the light it throws on one of the oldest archetypes in the human psyche—the ghost—and the whole supernatural army of phantoms, witches, demons and so on. *Are they all, in fact, nothing more than psycho-retinal flashbacks, transposed images of the observer himself, jolted onto the retinal screen by fear, bereavement, religious obsession?* The most notable thing about the majority of ghosts is how prosaically equipped they are, compared with the elaborate literary productions of the great mystics and dreamers. The nebulous white sheet is probably the observer's own nightgown. It's an interesting field for speculation. For example, take the most famous ghost in literature and reflect

how much more sense Hamlet makes if you realise that the ghost of his murdered father is really Hamlet himself."

"All right, all right," Larsen cut in irritably. "But how does this help me?"

Bayliss broke off his reflective up and down patrol of the floor, fixed an eye on Larsen. "I'm coming to that. There are two methods of dealing with this disfunction of yours. The classical technique is to pump you full of tranquillisers and confine you to a bed for a year or so. Gradually your mind would knit together, and primary neural pathways would reassemble themselves. Long job, boring for you and everybody else. The alternative method is frankly experimental, but I think it might work. I mentioned the phenomenon of the ghost because it's an interesting fact that although there have been tens of thousands of recorded cases of people being pursued by ghosts, and a few of the ghosts themselves being pursued, there have been no cases of ghost and observer actually meeting of their own volition. Tell me, what would have happened if, when you saw your double this afternoon, you had gone straight into the lounge and spoken to him?"

Larsen shuddered. "Obviously nothing, if your theory holds. I wouldn't like to test it."

"That's just what you're going to do. Don't panic. The next time you see a double sitting in a chair reading Kretschmer, go up and speak to him. If he doesn't reply sit down in the chair yourself. That's all you have to do."

Larsen jumped up, gesticulating. "For heaven's sake, Bayliss, are you crazy? Do you know what it's like to suddenly see yourself? All you want to do is run."

"I realise that, but it's the worst thing you can do. Why, whenever anyone grapples with a ghost, does it always vanish instantly? Because forcibly occupying the same physical co-ordinates as the double jolts the psychic projector onto a single channel again. The two separate streams of retinal images coincide and fuse. You've got to try, Larsen. It may be quite an effort, but you'll cure yourself once and for all, really blast those neuronics pathways clear again."

Larsen shook his head stubbornly. "The idea's insane." To himself he added: I'd rather shoot the thing. Then he remembered the .38 in his suitcase, and the presence of the weapon gave him a stronger sense of security than all Bayliss' drugs and advice. The revolver was a simple symbol of aggression, and even if the phantom was only an intruder in his own mind, it gave that portion which still remained intact greater confidence, enough possibly to dissipate the double's power.

Eyes half closed with fatigue, he listened vaguely to Bayliss,

nodding agreement to the latter's injunctions. Half an hour later he went back to his chalet, found the revolver and hid it under a magazine in the letterbox outside the lounge door. It was too conspicuous to carry, and anyway might fire accidentally and injure him. Outside the front door it would be safely hidden and yet easily accessible, ready to mete out a little old-fashioned punishment to any double dealer trying to play a fifth ace into the game.

Two days later, with unexpected vengeance, the opportunity came.

Bayliss had driven into town to buy a new stylus for the stereogram, leaving Larsen to prepare lunch for them while he was away. Larsen pretended to resent the chore, but secretly he was glad of something to do. He was tired of hanging around the chalets while Bayliss watched him as if he were an experimental animal, eagerly waiting for the next crisis. With luck this might never come, if only to spite Bayliss, who had been having everything too much his own way. Larsen had cut out the amphetamines altogether and felt nearer normalcy than he had at any time over the last three months.

After laying the table in Bayliss' kitchenette and getting plenty of ice ready for the martinis (alcohol was just the thing, Larsen readily decided, a wonderful CNS depressant) he went back to his chalet and put on a clean shirt. On an impulse he decided to change his shoes and suit as well, and fished out the blue office serge and black oxfords he had worn on his way out to the desert. Not only were the associations of the cream suit and sports shoes unpleasant, but a complete change of costume might well forestall the double's reappearance, provide a fresh psychic image of himself powerful enough to suppress any wandering versions. Looking at himself in the mirror, he decided to carry the principle even further. He switched on his shaver and cut away his moustache. Then he thinned out his hair and plastered it back smoothly across his scalp.

The transformation was certainly effective. When Bayliss climbed out of his car and walked into the lounge he almost failed to recognise Larsen. He flinched back involuntarily at the sight of the sleek-haired, dark-suited figure who stepped suddenly from behind the kitchen door.

"What the hell are you playing at?" he snapped at Larsen. "This is no time for practical jokes." He surveyed Larsen critically. "You look like a cheap detective."

Larsen guffawed. The incident put him in high spirits, and after several martinis he began to feel extremely buoyant. He talked away rapidly through the meal, and made wise-

cracks and humorous asides. Strangely, though, Bayliss seemed eager to get rid of him; he realised why shortly after he returned to his chalet. His pulse had quickened. He found himself prowling around with rapid nervous movements; his brain felt overactive and accelerated. The martinis had only been partly responsible for his elation. Now that they were wearing off he began to see the real agent—some stimulant Bayliss had slipped him in the hope of precipitating another crisis.

Larsen stood by the window, staring out angrily at Bayliss' chalet. The psychologist's impudence and utter lack of scruple outraged him. His fingers fretted nervously across the blind. Suddenly he felt like kicking the whole place down and speeding off. With its plywood-thin walls and match-box furniture the chalet was nothing more than a cardboard asylum. Everything that had happened there, the breakdowns and his nightmarish phantoms, had probably been schemed up by Bayliss deliberately.

Larsen noticed that the stimulant seemed to be extremely powerful. The take-off was sustained and unbroken. He tried hopelessly to relax and level off, went into the bedroom and kicked his suitcase around, lit two cigarettes without realising it.

Finally, unable to contain himself any longer, he slammed the front door back and stormed out across the apron, determined to have everything out with Bayliss and demand an immediate sedative.

Bayliss' lounge was empty. Larsen plunged through into the kitchen and bedroom, discovered to his annoyance that Bayliss was having a shower. He hung around helplessly in the lounge for a few moments, then decided to wait in his chalet.

Head down, he crossed the bright sunlight at a fast stride, and was only a few steps from the darkened doorway when he noticed that a man in a blue suit was standing there watching him.

Heart leaping, Larsen shrank back, recognizing the double even before he had completely accepted the change of costume, the smooth-shaven face with its altered planes. The man hovered indecisively, flexing his fingers, and appeared to be on the verge of stepping down into the sunlight.

Larsen was about ten feet from him, directly in line with Bayliss' door. He backed away, at the same time swinging to his left to the lee of the garage. There he stopped and pulled himself together. The double was still hesitating in the doorway, longer, he was sure, than he himself had done.

Larsen looked carefully at the face, repulsed and nauseated, not so much by the absolute accuracy of the image, but by a strange, almost luminous pastiness that gave the double's features the distinctive waxy sheen of a corpse. It was this unpleasant gloss that held Larsen back—the double was an arm's length from the letterbox holding the .38, and nothing could have induced Larsen to approach it.

He decided to enter the chalet and watch the double from behind. Rather than use the kitchen door, which gave access to the lounge on the double's immediate right, he turned to circle the garage and climb in through the bedroom window on the far side.

He was picking his way through a dump of old mortar and barbed wire behind the garage when he heard a voice call out: "Larsen, you idiot, what do you think you're doing?"

It was Bayliss, leaning out of his bathroom window. Larsen stumbled, found his balance and waved Bayliss back angrily. Bayliss merely shook his head and leaned further out, drying his neck with a towel.

Larsen retraced his steps, signalling to Bayliss to keep quiet. He was crossing the space between the garage wall and the near corner of Bayliss' chalet when out of the side of his eye he noticed a dark-suited figure standing with its back to him a few yards from the garage door.

The double had moved! Larsen stopped and whirled round, Bayliss forgotten, and watched the double warily. He was poised on the balls of his feet, as Larsen had been only a minute or so earlier, elbows up, hands weaving defensively. His eyes were hidden, but he appeared to be looking at the front door of Larsen's chalet.

Automatically, Larsen's eyes also moved to the doorway.

The original blue-suited figure still stood there, staring out into the sunlight!

There was not one double now, but two!

For a moment Larsen goggled helplessly at the two figures, standing on either side of the apron like half-animated dummies in a waxworks tableau.

Suddenly the figure with its back to him swung sharply on one heel and began to stalk rapidly towards him. He stared sightlessly at Larsen, the sunlight exposing his face, and with a jolt of horror Larsen recognised for the first time the perfect similarity of the double—the same plump cheeks, the same mole by the right nostril, the white upper lip with the same small razor cut where the moustache had been shaved away. But above all he recognised the man's state of shock and anxiety, the nervous lips, the tension around the neck and

facial muscles, the utter exhaustion just below the surface of the mask.

His voice strangled, Larsen turned and bolted.

He stopped running about two hundred yards out in the desert beyond the edge of the apron. Gasping for breath, he dropped to one knee behind a narrow sandstone outcropping and looked back at the chalets. The second double was making his way around the garage, climbing through the tangle of old wire. The other was crossing the space between the chalets. Oblivious of them both, Bayliss was struggling with the bathroom window, forcing it back so that he could see out into the desert.

Trying to steady himself, Larsen wiped his face on his jacket sleeve. So Bayliss had been right, although he had never anticipated that more than one image could be seen during any single attack. But in fact Larsen had spawned two in close succession, each at a critical phase during the last five minutes. Somehow the psychic projector must have received two separate jolts, and was now throwing two distinct streams of images onto the retinal screen.

Wondering whether to wait for the images to fade, Larsen remembered the revolver in the letterbox. However irrational, it seemed his only hope. With it he would be able to test the ultimate validity of the doubles, drive them back out of his mind.

The outcropping ran diagonally to the right to the edge of the apron. Crouching forwards, he scurried along it, pausing at intervals to follow the scene. The two doubles were still holding their positions, though Bayliss had closed his window and disappeared.

Larsen reached the edge of the apron, which was built on a shallow table about a foot off the desert floor, and moved along its rim to where an old fifty-gallon drum gave him a vantage point. To reach the revolver he decided to go round the far side of Bayliss' chalet, where he would find his own doorway unguarded except for the double watching by the garage.

He was about to step forward when something made him look over his shoulder.

Running straight towards him along the outcropping, head down, hands almost touching the ground, was an enormous ratlike creature, moving at tremendous speed. Every ten or fifteen yards it paused for a moment, and looked out at the chalets, and Larsen caught a glimpse of its face, insane and terrified, another replica of his own.

"Larsen! Larsen!"

Bayliss stood by the chalet, waving out at the desert.

Larsen glanced back at the phantom hurtling towards him, now only thirty feet away, then jumped up and lurched helplessly across to Bayliss.

Bayliss caught him firmly with his hands, pulled him together. "Larsen, what's the matter with you? Are you having an attack?"

Larsen gestured frantically at the figures around him. "Stop them, Bayliss, for God's sake," he gasped. "I can't get away from them."

Bayliss shook him roughly. "You can see *more* than one? Where are they? Show me."

Larsen pointed at the two figures hovering luminously near the chalet, then waved limply in the direction of the desert. "By the garage, and over there along the wall. There's another hiding along that ridge."

Bayliss seized him by the arm. "Come on, man, you've got to face up to them, it's no use running." He tried to drag Larsen towards the garage, but Larsen pulled away and slipped down onto the concrete.

"I can't, Bayliss, believe me. There's a gun in my letterbox. Get it for me. It's the only way."

Bayliss hesitated, looking down at Larsen, slumped inertly on his knees. "All right. Try to hold on."

Larsen stood up, pointed to the far corner of Bayliss' chalet. "I'll wait over there for you."

As Bayliss ran off swiftly he hobbled towards the corner. Halfway there he tripped across the remains of an old ladder lying on the ground and twisted his right ankle savagely between two of the rungs.

Clasping his foot, he sat down just as Bayliss appeared between the chalets, the .38 in his hand. He looked around uncertainly for Larsen, who cleared his throat to call him.

Before he could open his mouth he saw the double who had followed him along the ridge leap up from behind the drum and stumble up to Bayliss across the concrete floor. He was dishevelled and exhausted, jacket almost off his shoulders, collar open, the tie knot under one ear. So the image was still pursuing him, dogging his footsteps like an obsessed shadow.

Larsen tried to call to Bayliss again, but something he saw choked the voice in his throat.

Bayliss was looking at his double!

Larsen wrenched himself to his feet, feeling a sudden premonition of terror. He tried to wave to Bayliss, but the latter was watching the double intently as it pointed to the figures nearby, nodding to it in apparent agreement.

"Bayliss!"

The shot drowned his cry. Bayliss had fired somewhere between the garages, and the echo of the shot bounded among the chalets. The double was still beside him, pointing in all directions. Bayliss raised the revolver and fired again. The sound slammed violently at Larsen, making him feel stunned and sick.

Now Bayliss too was suffering the same psychotic attack, seeing two simultaneous images, but in his case not of himself, but of Larsen, on whom his mind had been focussing for the past weeks. A repetition of Larsen stumbling over to him and pointing at the phantoms was being played over onto Bayliss' retinal screens, diabolically at the exact moment when he had returned with the revolver and was searching for a target.

Larsen started to stumble away, trying to reach the corner wall. A third shot roared through the air and a vicious flash of fire was reflected in the bathroom window.

He had almost reached the corner when he heard Bayliss scream. Leaning one hand against the wall, he looked back.

Mouth open, Bayliss was staring wildly at him, the revolver clenched like a bomb in his hand. Beside him the blue-suited figure stood quietly, straightening its tie.

At last Bayliss had realized he could see two images of Larsen, one beside him, the other twenty feet away against the chalet.

But how was he to know which was the real Larsen? Staring blankly at Larsen, he seemed unable to decide.

Then the double by his shoulder raised one arm and pointed at Larsen, towards the corner wall to which he himself had pointed a minute earlier.

Larsen tried to scream, then hurled himself at the wall and desperately pulled himself along it. Beside him Bayliss' feet came thudding across the concrete.

He heard only the first of the three shots.

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For the first few days it was fairly easy.

"Keep away from windows and don't think about it," Dr. Neill told them. "As far as you're concerned it was just another compulsion. At 11:30 or 12:00 go down to the gym and throw a ball around, play some table tennis. At 2:00 they're running a movie for you in the Neuro theatre. Read the papers for a couple of hours, put on some records. I'll be down at 6:00 and tap off those amino-residues. By 7:00 you'll be in a manic swing."

"Any chance of a sudden blackout, Doctor?" Avery asked.

"Absolutely none," Neill said. "If you get tired, rest, of course. That's the one thing you'll probably have a little difficulty getting used to. Remember, you're still burning off only 3,500 calories, so your kinetic level—and you'll notice this most by day—will be about a third lower. You'll have to take things easier, make allowances. Most of these have been programmed in for you, but start learning to play chess, focus that inner eye."

Gorrell leaned forward. "Doctor," he asked, "if we want to, can we look out of the windows?"

Dr. Neill smiled. "Don't worry," he said. "The wires are cut. You couldn't go to sleep now if you tried."

Neill waited until the three men had left the lecture room on their way back to the Recreation Wing and then stepped down from the dais and shut the door. He was a short, broad-shouldered man in his fifties, with a powerful neck and hard, small features. He swung a chair out of the front row and straddled it deftly.

"Well?" he asked.

Morley was sitting on one of the desks against the back wall, legs up, playing aimlessly with a pencil. At thirty he

was the youngest member of the team working under Neill at the Clinic, but he'd noticed that Neill liked to talk to him.

He saw Neill was waiting for an answer and shrugged.

"Everything seems to be going O.K.," he said. "Surgical convalescence is over and all the servos are working smoothly. Body chemistry, cardiac rhythms, EEG, completely normal. I saw the X-rays this morning and the archoid ridges have sealed beautifully."

Neill watched him quizzically. "You don't sound as if you really approve."

Morley laughed and stood up. "Of course I do." He walked down the aisle between the desks, white coat unbuttoned, hands sunk deep in his pockets. "No, so far you've vindicated yourself on every point. The party's only just beginning, but the guest's are in damn good shape. No doubt about it. I thought three weeks was a little early to bring them out of hypnosis, but you'll probably be right there as well. Tonight is the first one they take on their own. Let's see how they are tomorrow morning."

"What are you secretly expecting?" Neill asked wryly. "Massive feed-back from the medulla?"

"No," Morley said. "There again the psychometric tests have shown absolutely nothing coming up at all. Not a single trauma." He stared at the blackboard and then looked round at Neill. "Yes, as a cautious estimate I'd say you've succeeded."

Neill leaned forward on his elbows, flexed his jaw muscles. "I think I've more than succeeded. Blocking those medullary synapses has eliminated a lot of material I thought would still be there—the minor quirks and complexes, the petty aggressive phobias, the small change in the psychic bank. Most of them have gone, or at least they don't show in the tests. However, they're the side targets, and thanks to you, John, and to everyone else in the team, we've hit a bull's eye on the main one."

Morley murmured something, but Neill ran on in his clipped, rapid voice. "None of you realize it yet, but this is as big an advance as the step the first ichthypod took out of the protozoic sea 300 million years ago. At last we've freed the mind, raised it out of that archaic sump called sleep, its nightly retreat into the medulla. With virtually one cut of the scalpel we've added twenty years to those men's lives."

"I only hope they know what to do with them," Morley commented sombrely.

"Come, John," Neill snapped back. "That's not an argument. What they do with the time is their responsibility anyway. They'll make the most of it, just as we've always made

the most, eventually, of any opportunity given us. It's too early to think about it yet, but visualise the universal application of our technique. For the first time Man will be living a full twenty-four hour day, not spending a third of it as an invalid, snoring his way through an eight-hour peepshow of infantile erotica."

Tired, Neill broke off and rubbed his eyes. "What's worrying you?" he asked, glancing up at Morley.

Morley made a small, helpless gesture with one hand. "I'm not sure, it's just that I . . ." He played with the big red plastic brain mounted on a stand next to the blackboard. Reflected in one of the frontal whorls was a distorted image of Neill, with a twisted chinless face and vast domed cranium. Sitting alone among the desks in the empty lecture room he looked like an insane genius patiently waiting to take an examination no one could set him.

Morley spanned the model with his finger, watched the image blur and dissolve.

"I know all you've done is close off a few of the loops in the hypothalamus, and I realize the results are going to be spectacular. You'll probably precipitate the greatest social and economic revolution since the Fall. But for some reason I can't get that story of Chekov's out of my mind—the one about the man who accepts a million-rouble bet that he can't shut himself up alone for ten years. He tries to, nothing goes wrong, but one minute before the time's up he deliberately steps out of his room. Of course, he's insane."

"So?"

"I don't know. I've been thinking about it all week, but I can't see where the tie-up is."

Neill let out a light snort. "I suppose you're trying to say that sleep is some sort of communal activity and that these three men are now isolated, exiled from the group unconscious, the dark oceanic dream. Is that it?"

"Maybe."

"Nonsense, John. The further we hold back the unconscious the better. We're reclaiming some of the marshland. Psychologically sleep is nothing more than an inconvenient symptom of cerebral anoxaemia. It's not *that* you're afraid of missing, it's the dream. You want to hold on to your front-row seat at the peepshow."

"No," Morley said mildly. "What I really mean is that for better or worse Lang, Gorrell and Avery are now stuck with themselves. For the duration. They're never going to be able to get away, not even for a couple of minutes, let alone eight hours. How much of yourself can you stand? Maybe you need eight hours off a day just to get over the

shock of being yourself. Remember, you and I aren't always going to be around, feeding them with tests and movies. What will happen if they get fed up with themselves?"

"They won't," Neill said. He stood up, suddenly bored by Morley's questions. "The total tempo of their lives will be lower than ours, these stresses and tensions won't begin to crystallise. We'll soon seem like a lot of manic-depressives to them, running round like dervishes half the day, then collapsing into a stupor the other half."

He moved towards the door, reached out to the light switch. "Well, I'm just about at the bottom of my curve. See you at 6 o'clock."

They left the lecture room and started down the corridor together.

"What are you doing now?" Morley asked.

Neill grinned ruefully. "What do you think?" he said. "I'm going to go and get myself a good night's sleep."

A little after midnight Avery and Gorrell were playing table-tennis in the floodlit gym. They were competent players, and passed the ball backward and forward with a minimum of effort. Both felt strong and alert; Avery was sweating slightly, but this was due to the long banks of arc-lights blazing down from the roof—maintaining, for safety's sake, an illusion of continuous day—rather than to any excessive exertion of his own. Tall and detached, with a lean, closed face, he made no attempt to talk to Gorrell and concentrated on adjusting himself to the period ahead. He knew he would find no trace of fatigue, but as he played he carefully checked his respiratory rhythms and muscle tonus, and kept one eye closely on the clock, scoring off the quarter-hour intervals.

Gorrell, usually a relaxed, amiable cycloid, was also subdued. Between strokes he glanced cautiously round the gym, noting the high hangarlike walls, the broad, polished floor, the shuttered skylights in the roof. Now and then, without realizing it, he fingered the circular trepan scar between his mastoid bones at the back of his head.

Out in the centre of the gym a couple of armchairs and a sofa had been drawn up round a phonograph, and here Lang was playing chess with Morley, doing his section of night duty. He hunched forward over the chessboard, wiry-haired and aggressive, with a small, sharp nose and mouth, watching the pieces closely. He had played regularly against Morley since he arrived at the Clinic four months earlier, and the two were almost equally matched, with perhaps a slight edge to Morley. But tonight Lang had opened with a new attack and after ten moves had completed his development and

begun to split Morley's defence. His mind felt clear and precise, focused sharply on the game in front of him with no penumbral fall-off, though only that morning had he finally left the cloudy limbo of posthypnosis through which he and the two others had drifted for three weeks like lobotomised phantoms.

Behind him, along one wall of the gym, were the offices housing the control unit, and looking over his shoulder he saw a face peering at him through the small circular observation window in one of the doors. Here, at constant alert, a group of orderlies and internes lounged around waiting by their emergency trollies. (The end door, into a small ward containing three cots, was kept carefully locked.) After a few moments the face withdrew, and Lang smiled at the elaborate machinery watching over him. His transference onto Neill had been positive and he had absolute faith in the success of the experiment. Neill had assured him that, at worst, the sudden accumulation of metabolites in his bloodstream might induce a mild torpor, but his brain would be unimpaired.

"Nerve fibre, Robert," Neill had told him time and time again, "never fatigues. The mind cannot tire."

While he waited for Morley to move he checked the time from the clock mounted against the wall. 12:20. Morley yawned, neck muscles bunching under his drawn grey skin. He looked tired, drab. He slumped down into the armchair, his face in one hand. Lang reflected how frail and primitive those who slept would soon seem, their minds sinking off each evening under the load of accumulating toxins, the edge of their awareness worn and frayed. Suddenly he realised that at that very moment Neill himself was asleep. A curiously disconcerting vision of Neill, huddled in a rumpled bed two floors above, his blood-sugar low, his metabolism sluggish, his mind drifting, rose before him.

Lang laughed at his own conceit, and Morley retrieved the rook he had just moved.

"I must be going blind. What am I doing?"

"No," Lang said. He started to laugh again. "I've just discovered I'm awake."

Morley grinned. "We'll have to put that down as one of the sayings of the week." He replaced the rook, sat up and looked across at the table-tennis pair. Gorell had swiped a fast backhand low over the net and Avery was trotting to the rear of the gym after the ball.

"They seem to be O.K. How about you?"

"Right on top of myself," Lang said. His eyes flicked quickly up and down the board and he moved before Morley caught his breath back.

Usually they went right through into the end-game, but tonight Morley had to concede on the twentieth move.

"Good," he said encouragingly. "You'll be able to take on Neill soon. Like another?"

"No. Actually the game bores me a little. I can see that's going to be a problem."

"You'll face it. You're not swimming now, you're walking. Give yourself time to find your legs."

Lang pulled one of the Bach albums out of its rack in the phonograph cabinet. He put a Brandenburg Concerto on the turn table and lowered the sapphire. As the rich, contrapuntal patterns chimed out he tapped a foot and jiggled up and down in his seat.

Morley thought: Crazy. How fast can you run? Three weeks ago you were strictly a hep-cat.

The next few hours passed rapidly.

At 1:30 they left the gym and went up to the Surgery Lab, where Morley and one of the interns gave them a quick physical, checking their renal clearances, heart rate and reflexes.

Dressed again, they went into the cafeteria for a snack and sat on the stools, arguing what to call this new fifth meal. Avery suggested 'Midfood,' Morley 'Munch.'

At two they took their places in the Neurology theatre, they spent a couple of hours watching films of the hypno-drills of the past three weeks.

When the programme ended they started down for the gym, the night-drag almost over. They were still relaxed and cheerful; Gorrell led the way, playfully ribbing Lang over some of the episodes in the films, mimicking his trancelike walk.

"Eyes shut, mouth open," he demonstrated, swerving into Lang, who jumped nimbly out of his way. "Look at you; you're doing it even now. Believe me, Lang, you're not awake, you're damn well somnambulating." He called back to Morley, "Agreed, Doctor?"

Morley swallowed a yawn and grinned. "Well, if he is, that makes two of us." He followed them along the corridor, doing his best to stay awake, feeling as if he, and not the three men in front of him, had been without sleep for the last three weeks.

Then, as they turned into the stairway leading down to the gym, something happened that snapped him back to full consciousness and gave him his first jolting glimpse of danger.

Though the Clinic was asleep, at Neill's orders all lights along the corridors and down the stairway had been left on. Ahead of them two orderlies checked that windows they passed

were safely screened and doors were shut. Nowhere was there a single darkened alcove or shadow-trap.

Neill had insisted on this, reluctantly acknowledging a possible reflex association between darkness and sleep: "Let's admit it. In all but a few organisms the association *is* strong enough to be a reflex. The higher mammals depend for their survival on a highly acute sensory apparatus, combined with a varying ability to store and classify information. Plunge them into darkness, cut off the flow of visual data to the cortex, and they're paralysed. Sleep is a defence reflex. It lowers the metabolic rate, conserves energy, increases the organism's survival-potential by merging it into its habitat . . ."

On the landing halfway down the staircase was a wide, shuttered window that by day opened out onto the parkscape behind the Clinic. As he passed it Gorell suddenly stopped. He went over, released the blind, then unlatched the shutter.

Still holding it closed, he turned to Morley, watching from the flight above.

"Tabu, Doctor?" he asked.

Morley hesitated, looked at each of the three men in turn. Gorrell was calm and unperturbed, apparently satisfying nothing more sinister than an idle whim. Lang squatted on the rail, watching curiously, with an expression of clinical disinterest. Only Avery seemed slightly anxious, his thin face wan and pinched. Morley had an irrelevant thought: 5 A.M. shadow—they'll need to shave twice a day. Then: why isn't Neill here? He knew they'd make for a window as soon as they got the chance.

He noticed Gorrell giving him an oblique, amused smile and shrugged, trying to disguise his uneasiness.

"Go ahead, if you want to. As Neill said, the wires are cut."

Gorrell threw back the shutter, and they clustered round the window and stared out into the night. Below, pewter-grey lawns stretched toward the pines and low hills in the distance. A couple of miles away on their left a neon sign slowly winked and beckoned.

Neither Gorrell nor Lang noticed any reaction, and their interest began to flag within a few moments. Avery felt a sudden lift under the heart, then quickly controlled himself. His eyes began to sift the darkness; the sky was clear and cloudless, and through the stars he picked out the narrow, milky traverse of the galactic rim. He watched it silently, letting the cool wind fan the sweat off his face and neck.

Morley stepped over to the window, leaned his elbows on the sill next to Avery. Out of the corner of his eye he carefully waited for any motor tremor—a fluttering eyelid, ac-

celerated breathing—that would signal a reflex discharging. He remembered Neill's warning: "In Man sleep is largely volitional, and the reflex is conditioned by habit. But just because we've cut out the hypothalamic loops regulating the flow of consciousness doesn't mean the reflex won't discharge down some other pathway. That's where we could easily run into trouble. However, sooner or later we'll have to take the risk and give them a glimpse of the dark side of the sun."

Morley was musing on this when he felt something nudge his shoulder.

"Doctor," he heard Lang say. "Doctor Morley."

He pulled himself together with a start, saw that he was alone at the window. Gorrell and Avery were halfway down the next flight of stairs.

"What's up?" Morley asked quickly.

"Nothing," Lang assured him. "We're just going back to the gym." He looked closely at Morley. "You O.K.?"

Morley rubbed his face. "God," he said with a laugh. "I must have been asleep." He glanced at his watch. 4:20. They'd been at the window for over fifteen minutes. All he could remember was leaning on the sill. "And I was worried about it knocking *you* out."

Everybody was amused, Gorrell particularly.

"You'd better watch that reflex, Doctor," he drawled. "If you're interested I can recommend you to a good narcotomist."

After five o'clock they all felt a gradual ebb of tonus from their arm and leg muscles. Renal clearances were falling and breakdown products were slowly clogging their tissues. Their palms felt damp and numb, the soles of their feet like pads of sponge rubber. The sensation was vaguely unsettling, for it was allied to no feelings of mental fatigue. Gorrell and Lang tried walking round the gym, finally gave up and sat down.

The numbness spread. Avery noticed it stretching the skin over his cheekbones, pulling at his temples, giving him a slight frontal migraine. He doggedly turned the pages of a magazine, his hands like lumps of putty, watching the clock edge round to six.

Then Neill came down, and they began to revive. Neill looked fresh and spruce, bouncing on the tips of his toes.

"How's the night shift going?" he asked briskly, walking round each one of them in turn, smiling as he sized them up. "Feel all right?"

"Not too bad, Doctor," Gorrell told him. "Just a slight case of insomnia."

Neill roared, slapped him on the shoulder and led the way up to the Surgery lab.

At nine, shaved, showered and in fresh clothes, they assembled in the lecture room. They felt cool and alert again. The peripheral numbness and slight head torpor had gone as soon as the detoxication drips had been plugged in, and Neill told them that within a week their kidneys would have enlarged sufficiently to cope on their own.

All morning and most of the afternoon they worked on a series of IQ, associative and performance tests; Neill kept them hard at it, steering swerving blips of light around a cathode screen, juggling with intricate numerical and geometric sequences, elaborating word-chains.

He seemed more than satisfied with the results.

"Shorter access times, deeper memory traces," he pointed out to Morley when the three men had gone off at five for the rest period. "Barrels of prime psychic marrow." He gestured at the test cards spread out across the desk in his office. "And you were worried about the Unconscious. Look at those Rorschachs of Lang's. Believe me, John, I'll soon have him reminiscing about his foetal experiences."

Morley nodded, his first doubts fading.

Over the next two weeks either he or Neill was with the men continuously, sitting out under the floodlights in the centre of the gym, assessing their assimilation of the eight extra hours, carefully watching for any symptoms of withdrawal. Neill carried everyone along, from one programme phase to the next, through the test periods, across the long, slow hours of the interminable nights, his powerful egodynamic injecting enthusiasm into every member of the unit.

Privately, Morley worried about the increasing emotional overlay apparent in the relationship between Neill and the three men. He was afraid they were becoming conditioned to identify Neill with the experiment. (Ring the meal bell and the subject salivates; but suddenly stop ringing the bell after a long period of conditioning and it temporarily loses the ability to feed itself. The hiatus barely harms a dog, but it might trigger disaster in an already oversensitized psyche).

Neill was fully alert to this.

At the end of the first two weeks, when he caught a bad head cold after sitting up all night in the gym and decided to spend the next day in bed, he called Morley in to his office.

"The transference is getting much too positive. It needs to be eased off a little."

"I agree," Morley said. "But how?"

"Tell them I'll be asleep for forty-eight hours," Neill said. He picked up a huge stack of reports, plates and test cards and bundled them under one arm. "I've deliberately overdosed

myself with sedative to get some rest. I'm worn to a shadow, full fatigue syndrome, load-cells screaming. Lay it on."

"Couldn't that be rather drastic?" Morley asked. "They'll hate you for it."

But Neill only smiled and went off to requisition an office near his bedroom.

That night Morley was on duty in the gym from 10:00 P.M. to 6:00 A.M. As usual he first checked that the orderlies were ready with their emergency trollies, read through the log left by the previous supervisor, one of the senior internes, and then went over to the circle of chairs. He sat back on the sofa next to Lang and leafed idly through a magazine, watching the three men carefully. In the glare of the arc lights their lean faces had a sallow, cyanosed look. The senior interne had warned him that Avery and Gorrell might overtire themselves at table-tennis, but by 11:00 P.M. they stopped playing and settled down in the armchairs. They read desultorily and made two trips up to the cafeteria, escorted each time by one of the orderlies. Morley told them about Neill, but surprisingly none of them made any comment.

Midnight came slowly. Avery read, his long body hunched up in an armchair. Gorrell played chess against himself.

Morley dozed.

Lang felt restless. The gym's silence and absence of movement oppressed him. He switched on the phonograph and played through a Brandenburg, analysing its theme-trains. Then he ran a word-association test on himself, turning the pages of a book and using the top right-hand corner words as the control list.

Morley leaned over.

"Anything come up?" he asked.

"A few interesting responses." Lang found at note-pad and jotted something down. "I'll show them to Neill in the morning—or whenever he wakes up."

He gazed up pensively at the arc lights. "I was just speculating. What do you think the next step forward will be?"

"Forward where?" Morley asked.

Lang gestured expansively. "I mean up the evolutionary slope. 300 million years ago we became air-breathers and left the primeval sea behind. Now we've taken the next logical step forward and eliminated the sleep function. What's next?"

Morley shook his head. "The two steps aren't analogous. Anyway, in point of fact you haven't left the primeval sea behind. You're still carrying a private replica of it around as your blood-stream. All you did was encapsulate a necessary chunk of the physical environment in order to escape it."

Lang nodded. "Maybe. I was thinking of something else. Tell me, has it ever occurred to you how completely death-orientated the psyche is?"

Morley smiled. "Now and then," he said, wondering where this led.

"It's curious," Lang went on reflectively. "The pleasure-pain principle, the whole survival-compulsion apparatus of sex, the Super-Ego's obsession with tomorrow—most of the time the psyche can't see further than its own tombstone. Now why has it got this strange fixation? For one very obvious reason." He tapped the air with his forefinger. "Because every night it's given a pretty convincing reminder of the fate in store for it."

"You mean the black hole," Morley suggested wryly. "Sleep?"

"Exactly. It's simply a pseudo-death. Of course, you're not aware of it, but it must be terrifying." He frowned. "I don't think even Neill realises that, far from being restful, sleep is a genuinely traumatic experience."

So that's it, Morley thought. The great father analyst has been caught napping on his own couch. He tried to decide which were worse—patients who knew a lot of psychiatry, or those who only knew a little?

"Eliminate sleep," Lang was saying, "and you also eliminate all the fear and defence mechanisms erected round it. Then, at last, the psyche has a chance to orientate toward something more valid."

"Such as . . . ?" Morley asked.

"I don't know. Perhaps . . . Self?"

"Interesting," Morley commented. It was 3:10 A.M. He decided to spend the next hour going through Lang's latest test cards.

He waited a discretionary five minutes, then got up and walked over to the surgery office.

Lang hooked an arm across the back of the sofa and watched the orderly room door.

"What's Morley playing at?" he asked. "Either of you seen him anywhere?"

Avery lowered his magazine. "Didn't he go off into the orderly room?"

"Ten minutes ago," Lang said. "He hasn't looked in since. There's supposed to be someone on duty with us continuously. Where is he?"

Gorrell, playing solitaire chess, looked up from his board. "Perhaps these late nights are getting him down. You'd better go and wake him before Neill finds out. He's probably fallen asleep over a batch of your test cards."

Lang laughed and settled down in the sofa. Gorrell reached out to the phonograph, angled a record out of the rack and slid it onto the turntable.

As the phonograph began to hum Lang noticed how strangely silent and deserted the gym seemed. The Clinic was always quiet, but even at night a residual ebb and flow of sound—a chair dragging in the orderly room, a generator charging under one of the theatres—edded through and kept it alive.

Now the air was flat and motionless. Lang listened carefully. The whole place had the dead, echoless feel of an abandoned building.

He stood up, looked around and strolled over to the orderly room. He knew Neill discouraged casual conversation with the control crew, but Morley's absence puzzled him.

He reached the door and peered through the port to see if Morley was inside.

The room was empty.

The light was on. Two emergency trollies stood in their usual place against the wall near the door, a third was in the middle of the floor, a pack of playing cards strewn across its deck, but the group of three or four orderlies and internes had gone.

Lang hesitated, reached down to open the door, and found it had been locked.

He tried the handle again, then called out over his shoulder: "Avery. There's nobody in here."

"Well, try next door. They're probably getting briefed for tomorrow."

Lang stepped over to the surgery office and squinted through the porthole. The light was off and two lab coats hanging inside the door cut off most of the window, but he could just see the white enamelled desk and the big programme charts round the wall standing out in the dimness.

There was no one inside.

Avery and Gorrell were lounging back, watching him.

"Are they in there?" Avery asked.

"No." Lang turned the handle, felt it hold. "Door's locked."

Gorrell switched off the phonograph and he and Avery came over. They tried the two doors again.

"They're here somewhere," Avery said. "There must be at least one person on duty." He pointed to the end door. "What about that one?"

"Locked," Lang said. "69 always has been. I think it leads down to the basement."

"Let's try Neill's office then," Gorrell suggested. "If they

aren't in there we'll stroll through to Reception and try to check ourselves out. This must be some stunt of Neill's."

There was no window in the door to Neill's office. Gorrell knocked, waited, knocked again more loudly.

Lang tried the handle, then knelt down. "The light's off," he reported.

Avery turned and looked round at the two remaining doors out of the gym, both in the far wall, one leading up to the cafeteria and the Neurology wing, the other into the car park at the rear of the Clinic.

"Didn't Neill hint that he might spring something like this on us?" he asked. "To assess our panic thresholds and decide whether we can go through a night on our own."

"But Neill's asleep," Lang objected. "He'll be in bed for a couple of days. Unless . . ."

Gorrell jerked his head in the direction of the chairs. "Come on. He and Morley are probably watching us now. I thought there was something just a little too cunning about that head-cold story."

They went back to their seats.

Gorrell dragged the chess stool over to the sofa and set up the pieces. Avery and Lang stretched out in armchairs and opened magazines, turning the pages deliberately. Above them the banks of arc lights threw their wide cones of light down into the silence.

The only noise was the slow left-right, left-right motion of the clock.

3:15 A.M.

The shift was imperceptible. At first a slight change of perspective, a mere fading and regrouping of outlines. Somewhere a focus slipped, a shadow swung slowly across a wall, its angles breaking and lengthening. The motion was fluid, a procession of infinitesimals, but gradually its total direction emerged.

The gym was shrinking. Inch by inch, the walls were moving inwards, encroaching across the periphery of the floor. As they shrank towards each other their features altered: the rows of skylights below the ceiling blurred and faded, the power cable running along the base of the wall dimmed and merged into the skirting board, the square baffles of the air vents vanished into the grey distemper.

Above, like the undersurface of an enormous lift, the ceiling sank slowly towards the floor . . .

Gorrell leaned his elbows on the chessboard, face sunk in his hands. He had locked himself in a perpetual check, but he continued to shuttle the pieces in and out of one of the

corner squares, now and then gazing into the air for inspiration, while his eyes roved carefully up and down the walls around him.

Somewhere, he knew, Neill was watching him.

He moved, looked up and followed the wall opposite him down to the far corner, alert for the telltale signs of a retractable panel. He swept it up and down systematically, pausing to examine every dip and shadow. For some while he had been trying to discover Neill's spy-hole, but without any success. The walls were blank and featureless; he had twice covered every square foot of the two facing him, and apart from the three doors there appeared to be no fault or aperture of even the most minute size anywhere on their surface.

After a while his left eye began to throb painfully, and he pushed away the chessboard and lay back. Above him a line of fluorescent tubes hung down from the ceiling, mounted in checkered plastic brackets that diffused the light. He was about to comment on his search for the spy-hole to Avery and Lang when he realised that any one of them could conceal a microphone.

He decided to stretch his legs, stood up and sauntered off across the floor. After sitting over the chessboard for half an hour he felt cramped and restless, and would have enjoyed tossing a ball up and down, or flexing his muscles on a rowing machine. But annoyingly no recreation facilities, apart from the three armchairs and the phonograph, had been provided.

He reached the end wall and wandered round, listening for any sound from the adjacent rooms. He was beginning to resent Neill spying on him and the entire keyhole conspiracy, and he noted with relief that it was a quarter past three: in under three hours it would all be over.

The gym closed in. Now less than half its original size, its walls bare and windowless, the ceiling twenty-five feet from the floor, it was a vast, shrinking box. The sides slid on each other, merging along an abstract hairline, like gigantic planes severing in a multi-dimensional flux. Only the clock and a single door remained . . .

Lang had discovered where the microphone was hidden.

He sat forward in his chair, cracking his knuckles and fidgeting until Gorrell returned, then rose and offered him his seat. Avery was in the other armchair, feet up on the phonograph.

"Sit down for a bit," Lang said. "I feel like a stroll."

Gorrell lowered himself into the chair. "I'll ask Neill if

we can have a ping-pong table in here. Should help pass the time and give us some exercise."

"A good idea," Lang agreed. "If we can get the table through the door. Actually I doubt if there's enough room in here, even if we moved the chairs right up against the wall. Those tables are larger than you think."

He walked off across the floor surreptitiously peering through the orderly room window. The light was on, but there was still no one inside.

He ambled over to the phonograph and paced up and down near it for a few moments. Suddenly he swung round and caught his foot under the flex leading to the wall socket.

The plug fell out onto the floor. Lang left it where it lay, went over and sat down on the arm of Gorrell's chair, smiling to himself.

"I've just disconnected the microphone," he confided quietly.

Gorrell looked round carefully. "Where was it?"

Lang pointed. "Inside the phonograph." He laughed softly. "I slipped the plug out. I thought I'd pull Neill's leg. He'll be wild when he realises he can't hear us."

"Why do you think it was in the phono?" Gorrell asked.

"What better place? Besides, it couldn't be anywhere else. Apart from in there." He gestured at the light bowl suspended from the centre of the ceiling. "You can see it's empty except for two bulbs. The phonograph is the obvious place. I had a feeling it was there all along, but I wasn't sure until I noticed we had a phonograph, but no records."

Gorrell nodded sagely.

Lang moved away, chuckling to himself.

Above the door of Room 69 the clock ticked on at 3:15.

The motion was accelerating. What had once been the gym was now a small room, seven feet wide, a tight, almost perfect cube. The walls plunged inwards, along colliding diagonals, only a few feet from their final focus . . .

Avery noticed Gorrell and Lang pacing slowly round his chair.

"Either of you want to sit down yet?" he asked.

They both shook their heads. Avery rested for a few minutes and then climbed out of the chair and stretched himself.

"Quarter past three," he remarked, pressing his hands against the ceiling: "This is getting to be a long night."

He leaned back to let Gorrell pass him, and then started to follow the others round the narrow space between the arm-chair and the walls.

"I don't know how Neill expects us to stay awake in this

hole for twenty-four hours a day," he went on. "Why haven't we got a television set in here? Even a radio would be something."

They sidled round the chair together, Gorrell, followed by Avery, with Lang completing the circle, their shoulders beginning to hunch, their heads down as they watched the floor, their feet falling into the slow, leaden rhythm of the clock.

This, then, was the manhole: a narrow, vertical cubicle, a few feet wide, six deep. Above, a solitary, dusty bulb gleamed down from a steel grille. As if crumbling under the impetus of their own momentum, the surface of the walls had coarsened, and the texture was that of stone, streaked and pitted . . .

Gorrell bent down to loosen one of his shoelaces, and Avery bumped into him sharply, knocking his shoulders against the wall.

"O.K.?" he asked, taking Gorrell's arm. "This place is a little overcrowded. I can't understand why Neill ever put us in here."

He leaned against the wall, head bowed to prevent it from touching the ceiling, and gazed about thoughtfully.

Lang stood squeezed into the corner next to him, shifting his weight from one foot to the other.

Gorrell squatted down on his heels below them.

"What's the time?" he asked. "Any idea?"

"I'd say about 3:15," Lang offered. "More or less."

"Lang," Avery asked, "where's the ventilator here?"

Lang peered up and down the walls, across the small square of ceiling. "Must be one somewhere." Gorrell stood up and they shuffled round, examining the floor between their feet.

"There may be a vent in the light grille," Gorrell suggested. He reached up and slipped his fingers through the cage, running them behind the bulb.

"Nothing there. Odd. I should have thought we'd burn up the air in here within half an hour."

"Easily," Avery said. "You know, there's something—"

Just then Lang broke in. He gripped Avery's elbow tightly.

"Avery," he asked. "Tell me. How did we get here?"

"What do you mean, get here? We're on Neill's team."

Lang cut him off. "I know that." He pointed at the floor. "I mean, in here."

Gorrell shook his head slowly. "Take it easy, Lang. How do you think? Through the door."

Lang looked squarely at Gorrell, then at Avery.

"What door?" he asked calmly.

Gorrell and Avery hesitated, then swung round to look at

each wall in turn, scanning it from floor to ceiling. Avery ran his hands over the heavy masonry, then knelt down and felt the floor, digging his fingers at the rough stone slabs. Gorrell crouched beside him, scrabbling at the thin seams of dirt.

Lang backed out of their way into a corner, and watched them impassively. His face was calm and motionless, but in his left temple a single vein fluttered insanely.

When they finally stood up, staring at each other unsteadily, he flung himself between them at the opposite wall.

"Neill! Neill!" he shouted. He pounded angrily on the wall with his fists. "Neill! Neill!"

Above him the light slowly began to fade.

Morley closed the door of the surgery office behind him and went over to the desk. Though it was 3:15 A.M., Neill, head cold or no head cold, was probably awake, working on the latest material in the office next to his bedroom. Fortunately that afternoon's test cards, freshly marked by one of the internes, had only just reached his in-tray.

Morley picked out Lang's folder and started to sort through the cards, looking for the association and autoanalysis results. He suspected that Lang's responses to some of the key words and suggestion triggers lying disguised in the question forms might throw illuminating sidelights onto the real motives behind his equation of sleep and death.

The communicating door to the orderly room opened and an interne looked in.

"Do you want me to take over in the gym, Doctor?"

Morley waved him away. "Don't bother. I'm going back in a moment."

He selected the cards he wanted, began to initial his withdrawals. Glad to get away from the glare of the arc lights, he delayed his return as long as he could, and it was 3:25 A.M. when he finally left the office and stepped back into the gym.

The men were sitting where he had left them. Lang watched him approach, head propped comfortably on a cushion. Avery was slouched down in his arm-chair, nose in a magazine, while Gorrell hunched over the chessboard, hidden behind the sofa.

"Anybody feel like coffee?" Morley called out, deciding they needed some exercise.

None of them looked up or answered. Morley felt a flicker of annoyance, particularly at Lang, who was staring past him at the clock.

Then he saw something that made him slow down and stop. Lying on the polished floor ten feet from the sofa was a

chess piece. He went over and picked it up. The piece was the black king. He wondered how Gorrell could be playing chess with one of the two essential pieces of the game missing when he noticed three more pieces lying on the floor nearby.

His eyes moved along to where Gorrell was sitting.

Scattered over the floor below the chair and sofa was the rest of the set. Gorrell was slumped forwards over the stool. One of his elbows had slipped and the arm dangled between his knees, knuckles resting on the floor. The other hand supported his face. Dead grey eyes peered down at his feet.

Morley ran over to him, yelling: "Lang! Avery! Get the orderlies in here!"

He reached Gorrell, pulled him back off the stool.

"Lang!" he called again.

Lang was still staring at the clock, his body twisted in the stiff, unreal posture of a waxworks dummy.

Morley let Gorrell loll back into the chair, leaned over and glanced at Lang's face.

He quickly crossed to Avery, stretched out behind the magazine, and jerked his shoulder. Avery's head bobbed stiffly. The magazine slipped and fell from his hands, leaving his fingers curled in front of his face.

Morley stepped over Avery's legs to the phonograph. He switched it on, gripped the volume control and swung it round to full amplitude.

Above the orderly room door an alarm bell shrilled out through the silence.

"Weren't you with them?" Neill asked sharply.

"No," Morley admitted. They were standing by the door of the emergency ward. Two orderlies had just dismantled the electrotherapy unit and were wheeling the console away on a trolley. Outside in the gym a quiet, urgent traffic of nurses and internes moved past. All but a single bank of arc lights had been switched off, and the gym seemed like a deserted stage at the end of a performance.

"I slipped into the office to pick up a few test cards," he explained. "I wasn't gone more than ten minutes."

"You were supposed to watch them continuously," Neill snapped. "Not wander off by yourself whenever you felt like it. What do you think we had the gym and this entire circus rigged up for?"

It was a little after 5:30 A.M. After working hopelessly on the three men for a couple of hours, he was close to exhaustion. He looked down at them, lying inertly in their cots, canvas crash sheets buckled up to their chins. They had barely

changed, but their eyes were open and unblinking, and their faces had the empty, reflexless look of psychic zero.

An interne bent over Lang, thumbing a hypo. Morley stared at the floor. "I think they would have gone anyway."

"How can you say that?" Neill clamped his lips together. He felt frustrated and impotent. He knew Morley was probably right—the three men were in terminal withdrawal, unresponsive to either insulin or electro-therapy, and a vice-tight catatonic seizure like that didn't close in out of nowhere—but as always refused to admit anything without absolute proof.

He led the way into his office and shut the door.

"Sit down." He pulled a chair out for Morley and prowled off round the room, slamming a fist into his palm.

"All right, John. What is it?"

Morley picked up one of the test cards lying on the desk, balanced it on a corner and spun it between his fingers. Phrases swam through his mind, tentative and uncertain, like blind fish.

"What do you want me to say?" he asked. "Reactivation of the infantile imago? A regression into the great, slumbering womb? Or to put it more simply still—just a fit of pique?"

"Go on."

Morley shrugged. "Continual consciousness is more than the brain can stand. Any signal repeated often enough eventually loses its meaning. Try saying the word 'cow' fifty times. After a point the brain's self-awareness dulls. It's no longer able to grasp who or why it is, and it rides adrift."

"What do we do then?"

"Nothing. Short of re-scoring all the way down to Lumbar 1. The central nervous system just can't stand narcotomy."

Neill shook his head, came back from the window. "You're getting lost," he said curtly. "Juggling with generalities isn't going to bring those men back. First, we've got to find out what happened to them, what they actually felt and saw."

Morley frowned dubiously. "That jungle's marked 'private.' Even if you do, is a psychotic's withdrawal drama going to make any sense?"

"Of course it will. However insane it seems to us, it was real enough to them. If we know the ceiling fell in or the whole gym filled with ice cream or suddenly turned into a maze, we've got something to work on." He sat down on the desk. "Listen. Remember that story of Chekov's you told me about?"

"The Bet? Yes."

"I read it last night. Curious. It's a lot nearer what you're really trying to say than you know." He gazed shrewdly round

the office. "This room in which the man is penned for ten years symbolizes the mind driven to the furthest limits of self-awareness . . . My hunch is that something very similar happened to Avery, Gorrell and Lang. They must have reached a stage beyond which they could no longer contain the idea of their own identity, more or less as you said. But far from being unable to grasp the idea, I'd say that they were conscious of nothing else. Like the man in the spherical mirror, who can only see a single gigantic eye staring back at him."

"So you think their withdrawal is a straightforward escape from the eye, the vast overwhelming ego?"

"Not escape," Neill corrected. "The psychotic never escapes from anything. He's much more sensible. He merely readjusts reality to suit himself. Quite a trick to learn, too. The room in Chekov's story gives me a lead as to how they might have readjusted. Their particular equivalent of this room was the gym. I'm beginning to realize it was a big mistake to put them in there—all those lights blazing down, the huge floor, high walls. They merely exaggerate the sensation of overload. In fact the gym might easily have become an external projection of their own egos."

Neill drummed his fingers on the desk, then snapped them sharply. "My guess is that at this moment they're either striding around in there the size of hundred-foot giants, or else they've cut it down to their own dimensions. More probably that. They've just pulled the gym in on themselves."

Morley grinned bleakly. "So all we've got to do now is pump them full of honey and apomorphine and coax them out of their holes. Suppose they refuse?"

"They won't," Neill said. "You'll see."

There was a rap on the door. An interne stuck his head through.

"Lang's coming out of it, Doctor. He's calling for you."

Neill bounded out.

Morley followed him into the ward.

Lang was lying in his cot, body motionless under the crash sheet, his face a mask. His lips were parted slightly. No sound came from them but Morley, bending over next to Neill, could see his hyoid bone vibrating in spasms.

"He's very faint," the interne warned. "I doubt if he'll hold it. These may be fragments."

Neil pulled up a chair and sat down next to the cot. He made a visible effort of concentration, flexing his shoulders like a weight-lifter. He bent his head close to Lang's and listened.

Five minutes later it came through again.

Lang's lips quivered. His body arched under the crash sheet, straining at the buckles, and then subsided.

"Neill . . . Neill," he whispered. The sounds, thin and strangled, seemed to be coming from the bottom of a well.

"Neill . . . Neill . . . Neill . . ."

Neill stroked his forehead with a small, neat hand.

"Yes, Bobby," he said gently. His voice was feather-soft, caressing. "I'm here, Bobby. You can come out now."

THE WAITING GROUNDS

Whether Henry Tallis, my predecessor at Murak Radio Observatory, knew about the Waiting Grounds I can't say. On the whole it seems obvious he must have, and that the three weeks he spent handing the station over to me—a job which could easily have been done in three days—were merely to give him sufficient time to decide whether or not to tell me about them. Certainly he never did, and the implied judgment against me is one I haven't yet faced up to.

I remember that on the first evening after my arrival at Murak he asked me a question I've been puzzling over ever since.

We were up on the lounge deck of the observatory, looking out at the sand-reefs and fossil cones of the volcano jungle glowing in the false dusk, the great 250-foot steel bowl of the telescope humming faintly in the air above us.

"Tell me, Quaine," Tallis suddenly asked, "where would you like to be when the world ends?"

"I haven't really thought about it," I admitted. "Is there any urgency?"

"Urgency?" Tallis smiled at me thinly, his eyes amiable but assessing me shrewdly. "Wait until you've been here a little longer."

He had almost finished his last tour at the observatory and I assumed he was referring to the desolation around us which he, after fifteen years, was leaving thanklessly to my sole care. Later, of course, I realized how wrong I was, just as I misjudged the whole of Tallis' closed, complex personality.

He was a lean, ascetic-looking man of about fifty, withheld and moody, as I discovered the moment I debarked from the freighter flying me in to Murak. Instead of greeting me at the ramp he sat in the half-track a hundred yards away at the edge of the port, watching silently through dark glasses as I heaved

my suitcases across the burning, lava-thick sunlight, legs weary after the massive deceleration, stumbling in the unfamiliar gravity.

The gesture seemed characteristic. Tallis's manner was aloof and sardonic; everything he said had the same deliberately ambiguous overtones, that air of private mystery recluses and extreme introjects assume as a defence. Not that Tallis was in any way pathological—no one could spend fifteen years, even with six-month leaves, virtually alone on a remote planetary clinker like Murak without developing a few curious mannerisms. In fact, as I all too soon realized, what was really remarkable about Tallis was the degree to which he had preserved his sanity, not surrendered it.

He listened keenly to the latest news from Earth.

"The first pilotless launchings to Proxima Centauri are scheduled for 2250 . . . the U.N. Assembly at Lake Success have just declared themselves a sovereign state . . . V-R Day celebrations are to be discontinued—you must have heard it all on the radiocasts."

"I haven't got a radio here," Tallis said. "Apart from the one up there, and that's tuned to the big spiral networks in Andromeda. On Murak we listen only to the important news."

I nearly retorted that by the time it reached Murak the news, however important, would be a million years old, but on that first evening I was preoccupied with adjusting myself to an unfamiliar planetary environment—notably a denser atmosphere, slightly higher (1.2 E) gravity, vicious temperature swings from -30° to + 160°—and programming new routines to fit myself into Murak's 18-hour day.

Above all, there was the prospect of two years of near-absolute isolation.

Ten miles from Murak Reef, the planet's only settlement, the observatory was sited among the first hills marking the northern edge of the inert volcano jungle which spread southwards to Murak's equator. It consisted of the giant telescope and a straggling nexus of twenty or thirty asbestos domes which housed the automatic data processing and tracking units, generator and refrigerating plant, and a miscellany of replacement and vehicle stores, workshops and ancillary equipment.

The observatory was self-sufficient as regards electric power and water. On the nearby slopes farms of solar batteries had been planted out in quarter-mile strips, the thousands of cells winking in the sunlight like a field of diamonds, sucking power from the sun to drive the generator dynamos. On another

slope, its huge mouth permanently locked into the rock face, a mobile water synthesiser slowly bored its way through the desert crust, mining out oxygen and hydrogen combined into the surface minerals.

"You'll have plenty of spare time on your hands," the Deputy Director of the Astrographic Institute on Ceres had warned me when I initialled the contract. "There's a certain amount of routine maintenance, checking the power feeds to the reflector traverses and the processing units, but otherwise you won't need to touch the telescope. A big digital does the heavy thinking, tapes all the data down in 2000-hour schedules. You fly the cans out with you when you go on leave."

"So apart from shovelling the sand off the doorstep there's virtually nothing for me to do?" I'd commented.

"That's what you're being paid for. Probably not as much as you deserve. Two years will seem a long time, even with three leave intervals. But don't worry about going crazy. You aren't alone on Murak. You'll just be bored. £2000 worth, to be exact. However, you say you have a thesis to write. And you never know, you may like it there. Tallis, the observer you're taking over from, went out in '03 for two years like yourself, and stayed fifteen. He'll show you the ropes. Pleasant fellow, by all accounts, a little whimsical, probably try to pull your leg."

Tallis drove me down to the settlement the first morning to collect my heavy vacuum baggage that had travelled space-hold.

"Murak Reef," he pointed out as the old '95 Chrysler half-track churned through the thick luminous ash silted over the metal road. We crossed a system of ancient lava lakes, flat grey discs half a mile wide, their hard crusts blistered and pocked by the countless meteor showers that had driven into Murak during the past million years. In the distance a group of long flat-roofed sheds and three high ore elevators separated themselves from the landscape.

"I suppose they warned you. There's only one supply depot, a radio terminal and the mineral concession. Latest reliable estimates put the total population at seven."

I stared out at the surrounding desert floor, cracked and tiered by the heat swings into what looked like huge plates of rusted iron, and at the massed cones of the volcano jungle yellowing in the sand haze. It was 4 o'clock local time—early morning—but the temperature was already over 80°. We drove with windows shuttered, sun curtain down, refrigerating unit pumping noisily.

"Must be fun on Saturday night," I commented. "Isn't there anything else?"

"Just the thermal storms, and a mean noon temperature of 160°."

"In the shade?"

Tallis laughed. "Shade? You must have a sense of humour. There isn't any shade on Murak. Don't ever forget it. Half an hour before noon the temperature starts to go up two degrees a minute. If you're caught out in it you'll be as good as committing suicide."

Murak reef was a dust hole. In the sheds backing onto the depot the huge ore crushers and conveyors of the extraction plants clanked and slammed. Tallis introduced me to the agent, a morose old man called Pickford, and to two young engineers taking the wraps off a new grader. No one made any attempt at small talk. We nodded briefly, loaded my luggage onto the half-track and left.

"A taciturn bunch," I said. "What are they mining?"

"Tantalum, Columbium, the Rare Earths. A heartbreaking job; the concentrations are barely workable. They're tempted to Murak by fabulous commission rates, but they're lucky if they can even fill their norms."

"You can't be sorry you're leaving. What made you stay here fifteen years?"

"It would take me fifteen years to tell you," Tallis rejoined. "I like the empty hills and the dead lakes."

I murmured some comment, and aware that I wasn't satisfied he suddenly scooped a handful of grey sand off the seat, held it up and let it sift away through his fingers. "Prime archezoic loam. Pure bedrock. Spit on it and anything might happen. Perhaps you'll understand me if I say I've been waiting for it to rain."

"Will it?"

Tallis nodded. "In about two million years, so someone who came here told me."

He said it with complete seriousness.

During the next few days, as we checked the stores and equipment inventories and ran over the installation together, I began to wonder if Tallis had lost his sense of time. Most men left to themselves for an indefinite period develop some occupational interest: chess or an insoluble dream game or merely compulsive wood-whittling. But Tallis, as far as I could see, did nothing. The cabin, a three-storey drum built round a central refrigerating column, was spartan and comfortless. Tallis' only recreation seemed to be staring out at the volcano jungle. This was an almost obsessive activity—all evening and most of the afternoon he would sit up on the lounge deck, gazing out at the hundreds of extinct cones

visible from the observatory, their colours running the spectrum from red to violet as the day swung round into night.

The first indication of what Tallis was watching for came about a week before he was due to leave. He had crated up his few possessions and we were clearing out one of the small storage domes near the telescope. In the darkness at the back, draped across a pile of old fans, track links and beer coolers, were two pedal-powered refrigerator suits, enormous unwieldy sacks equipped with chest pylons and hand-operated cycle gears.

"Do you ever have to use these?" I asked Tallis, glumly visualising what a generator failure could mean.

He shook his head. "They were left behind by a survey team which did some work out in the volcanos. There's an entire camp lying around in these sheds, in case you ever feel like a weekend on safari."

Tallis was by the door. I moved my flashlight away and was about to switch it off when something flickered up at me from the floor. I stepped over the debris, searched about and found a small circular aluminium chest, about two feet across by a foot deep. Mounted on the back was a battery pack, a thermostat and a temperature selector. It was a typical relic of an expensively mounted expedition, probably a cocktail cabinet or hat box. Embossed in heavy gold lettering on the lid were the initials 'C.F.N.'

Tallis came over from the door.

"What's this?" he asked sharply, adding his flash to mine.

I would have left the case where it lay, but there was something in Tallis's voice, a distinct inflection of annoyance, that made me pick it up and shoulder past into the sunlight.

I cleaned off the dust, Tallis at my shoulder. Keying open the vacuum seals, I sprung back the lid. Inside was a small tape recorder, spool racks and a telescopic boom mike that cantilevered three feet up into the air and hovered a few inches from my mouth. It was a magnificent piece of equipment, a single-order job hand-made by a specialist, worth at least £500, apart from the case.

"Beautifully tooled," I remarked to Tallis. I tipped the platform and watched it spring gently. "The air bath is still intact."

I ran my fingers over the range indicator and the selective six-channel reading head. It was even fitted with a sonic trip, a useful device which could be set to trigger at anything from a fly's footfall to a walking crane's.

The trip had been set; I wondered what might have strayed across it, when I saw that someone had anticipated me. The

tape between the spools had been ripped out, so roughly that one spool had been torn off its bearings. The rack was empty, and the two frayed tabs hooked to the spool axles were the only pieces of tape left.

"Somebody was in a hurry," I said aloud. I depressed the lid and polished the initials with my finger tips. "This must have belonged to one of the members of the survey. *C.F.N.* Do you want to send it on to him?"

Tallis watched me pensively. "No. I'm afraid the two members of the team died here. Just over a year ago."

He told me about the incident. Two Cambridge geologists had negotiated through the Institute for Tallis' help in establishing a camp ten miles out in the volcano jungle, where they intended to work for a year, analyzing the planet's core materials. The cost of bringing a vehicle to Murak was prohibitive, so Tallis had transported all the equipment to the camp site and set it up for them.

"I arranged to visit them once a month with power packs, water and supplies. The first time everything seemed all right. They were both over sixty, but standing up well to the heat. The camp and laboratory were running smoothly, and they had a small transmitter they could have used in an emergency.

"I saw them three times altogether. On my fourth visit they had vanished. I estimated that they'd been missing for about a week. Nothing was wrong. The transmitter was working, and there was plenty of water and power. I assumed they'd gone out collecting samples, lost themselves and died quickly in the first noon high."

"You never found the bodies?"

"No. I searched for them, but in the volcano jungle the contours of the valley floors shift from hour to hour. I notified the Institute and two months later an inspector flew in from Ceres and drove out to the site with me. He certified the deaths, told me to dismantle the camp and store it here. There were a few personal things, but I've heard nothing from any friends or relatives."

"Tragic," I commented. I closed the tape recorder and carried it into the shed. We walked back to the cabin. It was an hour to noon, and the parabolic sun bumper over the roof was a bowl of liquid fire.

I said to Tallis: "What on earth were they hoping to catch in the volcano jungle? The sonic trip was set."

"Was it?" Tallis shrugged. "What are you suggesting?"

"Nothing. It's just curious. I'm surprised there wasn't more of an investigation."

"Why? To start with, the fare from Ceres is £800, and it's over £3000 from Earth. They were working privately.

Why should anyone waste time and money doubting the obvious?"

I wanted to press Tallis for details, but his last remark seemed to close the episode. We ate a silent lunch, then went out on a tour of the solar farms, replacing burnt-out thermocouples. I was left with a vanished tape, two deaths, and a silent teasing suspicion that linked them neatly together.

Over the next days I began to watch Tallis more closely, waiting for another clue to the enigma growing around him.

I did learn one thing that astonished me.

I had asked him about his plans for the future. These were indefinite—he said something vague about a holiday, nothing he anticipated with any eagerness, and sounded as if he had given no thought whatever to his retirement. Over the last few days, as his departure time drew closer, the entire focus of his mind became fixed upon the volcano jungle; from dawn until late into the night he sat quietly in his chair, staring out at the ghostless panorama of desintegrating cones, adrift in some private time sea.

"When are you coming back?" I asked with an attempt at playfulness, curious why he was leaving Murak at all.

He took the question seriously. "I'm afraid I won't be. Fifteen years is long enough, just about the limit of time one can spend continuously in a single place. After that one gets institutionalised—"

"Continuously?" I broke in. "You've had your leaves?"

"No, I didn't bother. I was busy here."

"Fifteen years!" I shouted. "Good God, why? In this of all places! And what do you mean 'busy'? You're just sitting here, waiting for nothing. What are you supposed to be watching for, anyway?"

Tallis smiled evasively, started to say something and then thought better of it.

The questions pressed round him. What *was* he waiting for? Were the geologists still alive? Was he expecting them to return, or make some signal? As I watched him pace about the cabin on his last morning I was convinced there was something he couldn't quite bring himself to tell me. Almost melodramatically he watched out over the desert, delaying his departure until the thirty-minute take-off siren hooted from the port. As we climbed into the half-track I fully expected the glowing spectres of the two geologists to come looming out of the volcano jungle, uttering cries of murder and revenge.

He shook my hand carefully before he went aboard. "You've got my address all right? You're quite sure?" For some reason, which confused my cruder suspicions, he had

made a special point of ensuring that both I and the Institute would be able to contact him.

"Don't worry," I said. "I'll let you know if it rains."

He looked at me sombrely. "Don't wait too long." His eyes strayed past my head towards the southern horizon, through the sand-haze to the endless sea of cones. He added: "Two million years is a long time."

I took his arm as we walked to the ramp. "Tallis," I asked quietly, "what are you watching for? There's something, isn't there?"

He pulled away from me, collected himself. "What?" he said shortly, looking at his wrist-watch.

"You've been trying to tell me all week," I insisted. "Come on, man."

He shook his head abruptly, muttered something about the heat and stepped quickly through the lock.

I started to shout after him: "Those two geologists are out there!" but the five-minute siren shattered the air and by the time it stopped Tallis had disappeared down the companion-way and crewmen were shackling on the launching gantry and sealing the cargo and passenger locks.

I stood at the edge of the port as the ship cleared its take-off check, annoyed with myself for waiting until the last impossible moment to press Tallis for an explanation. Half an hour later he was gone.

Over the next few days Tallis began to slide slowly into the back of my mind. I gradually settled into the observatory, and picked out the new routines to keep time continuously on the move. Mayer, the metallurgist down at the mine, came over to the cabin most evenings to play chess and forget his pitifully low extraction rates. He was a big, muscular fellow of thirty-five who loathed Murak's climate, geology and bad company, a little crude but the sort of tonic I needed after an overdose of Tallis.

Mayer had met Tallis only once, and had never heard about the deaths of the two geologists.

"Damned fools, what were they looking for? Nothing to do with geology, Murak hasn't any."

Pickford, the old agent down at the depot, was the only person on Murak who remembered the two men, but time had garbled his memories.

"Salesmen, they were," he told me, blowing into his pipe. "Tallis did the heavy work for them. Should never have come here, trying to sell all those books."

"Books?"

"Cases full. Bibles, if I recall."

"Textbooks," I suggested. "Did you see them?"

"Sure I did," he said, muttering to himself. "Fancy, expensive, bindings. He jerked his head sharply. "You won't sell them here, I told them."

It sounded exactly like a dry piece of academic humour. I could see Tallis and the two scientists pulling Pickford's leg, passing off their reference library as a set of commercial samples.

I suppose the whole episode would eventually have faded, but Tallis' charts kept my interest going. There were about twenty of them, half million aerals of the volcano jungle within a fifteen-mile radius of the observatory. One of them was marked with what I assumed to be the camp site of the geologists and alternative routes to and from the observatory. The camp was just over ten miles away, across terrain that was rough but not overdiffficult for a tracked car.

I still suspected I was getting myself wound up over nothing. A meaningless approach arrow on the charts, the faintest suggestion of a cryptic 'X,' and I would have been off like a rocket after a geldspar mine or two mysterious graves. I was almost sure that Tallis had not been responsible, either by negligence or design, for the deaths of the two men, but that still left a number of unanswered questions.

The next clear day I checked over the half-track, strapped a flare pistol into my knee holster and set off, warning Pickford to listen out for a May Day call on the Chrysler's transmitter.

It was just after dawn when I gunned the half-track out of the observatory compound and headed up the slope between two battery farms, following the route mapped out on the charts. Behind me the telescope swung slowly on its bogies, tirelessly sweeping its great steel ear through the Cepheid talk. The temperature was in the low seventies, comfortably cool for Murak, the sky a fresh cerise, broken by lanes of indigo that threw vivid violet lights on the drifts of grey ash on the higher slopes of the volcano jungle.

The observatory soon fell behind, obscured by the exhaust dust. I passed the water synthesiser, safely pointed at ten thousand tons of silicon hydrate, and within twenty minutes reached the nearest cone, a white broad-backed giant 200 feet high, and drove round it into the first valley. Fifty feet across at their summits, the volcanos jostled together like a herd of enormous elephants, separated by narrow dust-filled valleys, sometimes no more than a hundred yards apart, here and there giving way to the flat mile-long deck of a fossil lava lake. Wherever possible the route took advantage of these,

and I soon picked up the tracks left by the Chrysler on its trips a year earlier.

I reached the site in three hours. What was left of the camp stood on a beach overlooking one of the lakes, a dismal collection of fuel cylinders, empty cold stores and water tanks sinking under the tides of dust washed up by the low thermal winds. On the far side of the lake the violet-capped cones of the volcanos ranged southwards. Behind, a crescent of sharp cliffs cut off half the sky.

I walked round the site, looking for some trace of the two geologists. A battered tin field desk lay on its side, its green paint blistered and scratched. I turned it over, pulled out its drawers and found nothing except a charred notebook and a telephone, the receiver melted solidly into its cradle.

Tallis had done his job too well.

The temperature was over 100° by the time I climbed back into the half-track and a couple of miles ahead I had to stop, as the cooling unit was draining power from the spark plugs and stalling the engine. The outside temperature was 130°, the sky a roaring shield, reflected in the slopes around me so that they seemed to stream with molten wax. I sealed all the shutters and changed into neutral, and even then had to race the ancient engine to provide enough current for the cooler. I sat there for over an hour in the dim gloom of the dashboard, ears deadened by the engine roar, right foot cramping, cursing Tallis and the two geologists.

That evening I unfurled some crisp new vellum, flexed my slide rule and determined to start work on my thesis.

One afternoon two or three months later, as we turned the board between chess games, Mayer remarked: "I saw Pickford this morning. He told me he had some samples to show you."

"T.V. tapes?"

"Bibles, I thought he said."

I looked in on Pickford the next time I was down at the settlement. He was hovering about in the shadows behind the counter, white suit dirty and unpressed.

He puffed smoke at me. "Those salesmen," he explained. "You were enquiring about. I told you they were selling Bibles."

I nodded. "Well?"

"I kept some."

I put out my cigarette. "Can I see them?"

He gestured me round the counter with his pipe. "In the back."

I followed him between the shelves, loaded with fans, radios

and T.V.-scopes, all outdated models imported years earlier to satisfy the boom planet Murak had never become.

"There it is," Pickford said. Standing against the back wall of the depot was a three-by-three wooden crate, taped with metal bands. Pickford ferretted about for a wrench. "Thought you might like to buy some."

"How long has it been here?"

"About a year. Tallis forgot to collect it. Only found it last week."

Doubtful, I thought: more likely he was simply waiting for Tallis to be safely out of the way. I watched while he pried off the lid. Inside was tough brown wrapping paper. Pickford broke the seals and folded the sides back carefully, revealing a layer of black morocco-bound volumes.

I pulled out one of them and held the heavily ribbed spine up to the light.

It was a Bible, as Pickford had promised. Below it were a dozen others.

"You're right," I said. Pickford pulled up a chair and sat down, watching me.

I looked at the Bible again. It was in mint condition, the King James Authorised Version. The marbling inside the end-boards was unmarked. A publisher's tag slipped out onto the floor, and I realized that the copy had not come from a private library.

The bindings varied slightly. The next volume I pulled out was a copy of the Vulgate.

"How many crates did they have altogether?" I asked Pickford.

"Bibles? Fourteen, fifteen with this one. They ordered them all after they got here. This was the last one." He pulled out another volume and handed it to me. "Good condition, eh?"

It was a Koran.

I started lifting the volumes out and got Pickford to help me sort them on the shelves. When we counted them up there were ninety in all: thirty-five Holy Bibles (twenty-four Authorised Versions and eleven Vulgates) fifteen copies of the Koran, five of the Talmud, ten of the Bhagavat Gita and twenty-five of the Upanishads.

I took one of each and gave Pickford a £10 note.

"Any time you want some more," he called after me. "Maybe I can arrange a discount." He was chuckling to himself, highly pleased with the deal, one up on the salesman.

When Meyer called round that evening he noticed the six volumes on my desk.

"Pickford's samples," I explained. I told him how I had found the crate at the depot and that it had been ordered by the geologists after their arrival. "According to Pickford they ordered a total of fifteen crates. All Bibles."

"He's senile."

"No. His memory is good. There were certainly other crates because this one was sealed and he knew it contained Bibles."

"Damned funny. Maybe they were salesmen."

"Whatever they were they certainly weren't geologists. Why did Tallis say they were? Anyway, why didn't he ever mention that they had ordered all these Bibles?"

"Perhaps he'd forgotten?"

"Fifteen crates? Fifteen crates of Bibles? Heavens above, what did they do with them?"

Mayer shrugged. He went over to the window. "Do you want me to radio Ceres?"

"Not yet. It still doesn't add up to anything."

"There might be a reward. Probably a big one. God, I could go home!"

"Relax. First we've got to find out what these so-called geologists were doing here, why they ordered this fantastic supply of Bibles. One thing: whatever it was, I swear Tallis knew about it. Originally I thought they might have discovered a geldspar mine and been double-crossed by Tallis—that sonic trip was suspicious. Or else that they'd deliberately faked their own deaths so that they could spend a couple of years working the mine, using Tallis as their supply source. But all these Bibles mean we must start thinking in completely different categories."

Round the clock for three days, with only short breaks for sleep hunched in the Chrysler's driving seat, I systematically swept the volcano jungle, winding slowly through the labyrinth of valleys, climbing to the crest of every cone, carefully checking every exposed quartz vein, every rift or gulley that might hide what I was convinced was waiting for me.

Mayer deputised at the observatory, driving over every afternoon. He helped me recondition an old diesel generator in one of the storage domes and we lashed it onto the back of the half-track to power the cabin heater needed for the -30° nights and the three big spotlights fixed on the roof, providing a 360° traverse. I made two trips with a full cargo of fuel out to the camp site, dumped them there and made it my base.

Across the thick gluelike sand of the volcano jungle, we calculated, a man of sixty could walk at a maximum of one mile an hour, and spend at most two hours in 70° or above sunlight. That meant that whatever there was to find would be

within twelve square miles of the camp site, three square miles if we included a return journey.

I searched the volcanos as exactly as I could, marking each cone and the adjacent valleys on the charts as I covered them, at a steady five miles an hour, the great engine of the Chrysler roaring ceaselessly, from noon, when the valleys filled with fire and seemed to run with lava again, round to midnight, when the huge cones became enormous mountains of bone, sombre graveyards presided over by the fantastic colonnades and hanging galleries of the sand reefs, suspended from the lake rims like inverted cathedrals.

I forced the Chrysler on, swinging the bumpers to uproot any suspicious crag or boulder that might hide a mine shaft, ramming through huge drifts of fine white sand that rose in soft clouds around the half-track like the dust of powdered silk.

I found nothing. The reefs and valleys were deserted, the volcano slopes untracked, the craters empty, their shallow floors littered with meteor debris, rock sulphur and cosmic dust.

I decided to give up just before dawn on the fourth morning, after waking from a couple of hours of cramped and restless sleep.

"I'm coming in now," I reported to Mayer over the transmitter. "There's nothing out here. I'll collect what fuel there is left from the site and see you for breakfast."

Dawn had just come up as I reached the site. I loaded the fuel cans back onto the half-track, switched off the spotlights and took what I knew would be my last look round. I sat down at the field desk and watched the sun arcing upwards through the cones across the lake. Scooping a handful of ash off the desk, I scrutinised it sadly for goldspar.

"Prime archezoic loam," I said, repeating Tallis' words aloud to the dead lake. I was about to spit on it, more in anger than in hope, when some of the tumblers in my mind started to click.

About five miles from the far edge of the lake, silhouetted against the sunrise over the volcanos, was a long 100-foot high escarpment of hard slate-blue rock that lifted out of the desert bed and ran for about two miles in a low clean sweep across the horizon and disappeared among the cones in the south-west. Its outlines were sharp and well-defined, suggesting that its materials pre-dated the planet's volcanic period. The escarpment sat squarely across the desert, gaunt and rigid, and looked as if it had been there since Murak's beginning, while the soft ashy cones and grey hillocks around it had known only the planet's end.

It was no more than an uninformed guess, but suddenly I would have bet my entire two years' salary that the rocks of the escarpment were archezoic. It was about three miles outside the area I had been combing, just visible from the observatory.

The vision of a geldspar mine returned sharply!

The lake took me nearly halfway there. I raced the Chrysler across it at forty, wasted thirty minutes picking a route through an elaborate sand reef, and then entered a long steeply walled valley which led directly towards the escarpment.

A mile away I saw that the escarpment was not, as it had first seemed, a narrow continuous ridge, but a circular horizontal table. A curious feature was the almost perfect flatness of the table top, as if it had been deliberately levelled by a giant sword. Its slides were unusually symmetrical; they sloped at exactly the same angle, about 35° , and formed a single cliff unbroken by fissures or crevices.

I reached the table in an hour, parked the half-track at its foot and looked up at the great rounded flank of dull blue rock sloping away from me, rising like an island out of the grey sea of the desert floor.

I changed down into bottom gear and floored the accelerator. Steering the Chrysler obliquely across the slope to minimize the angle of ascent, I roared slowly up the side, tracks skating and racing, swinging the half-track around like a frantic pendulum.

Scaling the crest, I levelled off and looked out over a plateau about two miles in diameter, bare except for a light blue carpet of cosmic dust.

In the centre of the plateau, at least a mile across, was an enormous metallic lake, heat ripples spiralling upwards from its dark smooth surface.

I edged the half-track forward, head out of the side window, watching carefully, holding down the speed that picked up too easily. There were no meteorites or rock fragments lying about; presumably the lake surface cooled and set at night, to melt and extend itself as the temperature rose the next day.

Although the roof seemed hard as steel I stopped about 300 yards from the edge, cut the engine and climbed up onto the cabin.

The shift of perspective was slight but sufficient. The lake vanished, and I realized I was looking down at a shallow basin, about half a mile wide, scooped out of the roof.

I swung back into the cab and slammed in the accelerator. The basin, like the table top, was a perfect circle, sloping

smoothly to the floor about 100 feet below its rim, in imitation of a volcanic crater.

I braked the half-track at the edge and jumped out.

Four hundred yards away, in the basin's centre, five gigantic rectangular slabs of stone reared up from a vast pentagonal base.

This, then, was the secret Tallis had kept from me.

The basin was empty, the air warmer, strangely silent after three days of the Chrysler's engine roaring inside my head.

I lowered myself over the edge and began to walk down the slope towards the great monument in the centre of the basin. For the first time since my arrival on Murak I was unable to see the desert and the brilliant colours of the volcano jungle. I had strayed into a pale blue world, as pure and exact as a geometric equation, composed of the curving floor, the pentagonal base and the five stone rectangles towering up into the sky like the temple of some abstract religion.

It took me nearly three minutes to reach the monument. Behind me, on the skyline, the half-track's engine steamed faintly. I went up to the base stone, which was a yard thick and must have weighed over a thousand tons, and placed my palms on its surface. It was still cool, the thin blue grain closely packed. Like the megaliths standing on it, the pentagon was unornamented and geometrically perfect.

I heaved myself up and approached the nearest megalith. The shadows around me were enormous parallelograms, their angles shrinking as the sun blazed up into the sky. I walked slowly round into the centre of the group, dimly aware that neither Tallis nor the two geologists could have carved the megaliths and raised them onto the pentagon, when I saw that the entire inner surface of the nearest megalith was covered by row upon row of finely chiselled hieroglyphs.

Swinging round, I ran my hands across its surface. Large patches had crumbled away, leaving a faint indecipherable tracery, but most of the surface was intact, packed solidly with pictographic symbols and intricate cuneiform glyphics that ran down it in narrow columns.

I stepped over to the next megalith. Here again, the inner face was covered with tens of thousands of minute carved symbols, the rows separated by finely cut dividing rules that fell the full fifty-foot height of the megalith.

There were at least a dozen languages, all in alphabets I had never seen before, strings of meaningless ciphers among which I could pick out odd cross-hatched symbols that seemed to be numerals, and peculiar serpentine forms that might have represented human figures in stylised poses.

Suddenly my eye caught:

CYR*RK VII

A*PHA LEP**IS *D 1317

Below was another, damaged but legible.

AMEN*TEK LC*V

*LPHA LE*ORIS AD 13**

There were blanks among the letters, where time had flaked away minute grains of the stone.

My eyes raced down the column. There were a score more entries:

PONT*AR*H *CV

ALPH* L*PORIS A* *318

MYR*K LV*

A**HA LEPORI* AD 13*9

KYR** XII

ALPH* LEP*RIS AD 1*19

.....

The list of names, all from Alpha Leporis, continued down the column. I followed it to the base, where the names ended three inches from the bottom, then moved along the surface, across rows of hieroglyphs, and picked up the list three or four columns later.

M*MARYK XX*V

A*PHA LEPORI* AD 1389

CYRARK IX

ALPHA *EPORIS AD 1390

.....

I went over to the megalith on my left and began to examine the inscriptions carefully.

Here the entries read:

MINYS-259

DELT* ARGUS AD 1874

TYLNYS-413

DELTA ARGUS *D 1874

.....

There were fewer blanks; to the right of the face the entries were more recent, the lettering sharper. In all there were five distinct languages, four of them, including Earth's, translations of the first entry running down the left-hand margin of each column.

The third and fourth megaliths recorded entries from Gamma Grus and Beta Trianguli. They followed the same pattern, their surfaces divided into eighteen-inch wide columns, each of which contained five rows of entries, the four hieroglyphic languages followed by Earth's, recording the same minimal data in the same terse formula: Name—Place—Date.

I had looked at four of the megaliths. The fifth stood with its back to the sun, its inner face hidden.

I walked over to it, crossing the oblique panels of shadow withdrawing to their sources, curious as to what fabulous catalogue of names I should find.

The fifth megalith was blank.

My eyes raced across its huge unbroken surface, marked only by the quarter-inch deep grooves of the dividing rules some thoughtful master mason from the stars had chiselled to tabulate the entries from Earth that had never come.

I returned to the other megaliths and for half an hour read at random, arms outstretched involuntarily across the great inscription panels, finger tips tracing the convolutions of the hieroglyphs, seeking among the thousands of signatures some clue to the identity and purpose of the stellar races.

COPT*C LEAGUE MLV BETA TRIANGULI *D 1723
ISARI* LEAGUE* VII BETA *RIANGULI AD 1724

MAR-5-GO GAMMA GRUS AD 1959

VEN-7-GO GAMMA GRUS AD 1960

TETRARK XII ALPHA LEPORIS AD 2095

Dynasties recurred again and again, Cyrark's, Minys's, -Go's, separated by twenty- or thirty-year intervals that appeared to be generations. Before AD 1200 all entries were illegible. This represented something over half the total. The surfaces of the megaliths were almost completely covered, and initially I assumed that the first entries had been made roughly 2200 years earlier, shortly after the birth of Christ. However the frequency of the entries increased algebraically: in the 15th century there were one or two a year, by the 20th century there were five or six, and by the present year the number varied from twenty entries from Delta Argus to over thirty-five from Alpha Leporis.

The last of these, at the extreme bottom right corner of the megalith, was:

CYRARK CCCXXIV ALPHA LEPORIS AD 2218

The letters were freshly incised, perhaps no more than a day old, even a few hours. Below, a free space of two feet reached to the floor.

Breaking off my scrutiny, I jumped down from the base stone and carefully searched the surrounding basin, sweeping the light dust carpet for vehicle or foot marks, the remains of implements or scaffolding.

But the basin was empty, the dust untouched except for the single file of prints leading down from the half-track.

I was sweating uncomfortably, and the thermo-alarm strapped to my wrist rang, warning me that the air temperature was 85°, ninety minutes to noon. I re-set it to 100°,

took a last look round the five megaliths, and then made my way back to the half-track.

Heat waves raced and glimmered round the rim of the basin, and the sky was a dark inflamed red, mottled by the thermal pressure fields massing overhead like storm clouds. I jogged along at a half run, in a hurry to contact Mayer. Without his confirmation the authorities on Ceres would treat my report as the fantasy of a sand-happy lunatic. In addition, I wanted him to bring his camera; we could develop the reels within half an hour and radio a dozen stills as indisputable proof.

More important, I wanted someone to share the discovery, provide me with at least some cover in numbers. The frequency of entries on the megaliths, and the virtual absence of any further space—unless the reverse sides were used, which seemed unlikely—suggested a climax was soon to be reached, probably the climax for which Tallis had been waiting. Hundreds of entries had been made during his fifteen years on Murak; watching all day from the observatory, he must have seen every landing.

As I swung into the half-track the emergency light on the transceiver above the windscreen was pulsing insistently. I switched to audit and Mayer's voice snapped into my ear.

"Quaine? Is that you? Where the hell are you, man? I nearly put out a May Day for you!"

He was at the camp site. Calling in from the observatory when I failed to arrive, he assumed I had broken down and abandoned the half-track, and had come out seaching for me.

I picked him up at the camp site half an hour later, retroversed the tracks in a squealing circle of dust and kicked off again at full throttle. Mayer pressed me all the way back but I told him nothing, driving the Chrysler hard across the lake, paralleling the two previous sets of tracks and throwing up a huge cloud of dust 150 feet into the air. It was now over 95°, and the ash hills in the valley at the end of the lake were beginning to look angry and boiled.

Eager to get Mayer down into the basin, and with my mind spinning like a disintegrating flywheel, it was only as the half-track roared up the table slope that I felt a first chilling pang of fear. Through the windshield I hesitantly scanned the tilting sky. Soon after reaching the basin we would have to shut down for an hour, two of us crammed together in the fume-filled cabin, deafened by the engine, sitting targets with the periscope blinded by the glare.

The centre of the plateau was a pulsing blur, as the air trapped in the basin throbbed upwards into the sun. I drove straight towards it. Mayer stiffened in his seat. A hundred

yards from the basin's edge the air suddenly cleared and we could see the tops of the megaliths. Mayer leapt up and swung out of the door onto the running board as I cut the engine and slammed the half-track to a halt by the rim. We jumped down, grabbing flare pistols and shouting to each other, slid into the basin and sprinted through the boiling air to the megaliths looming up in the centre.

I half-expected to find a reception party waiting for us, but the megaliths were deserted. I reached the pentagon fifty yards ahead of Mayer, climbed up and waited for him, gulping in the molten sunlight.

I helped him up and led him over to one of the megaliths, picked a column and began to read out the entries. Then I took him round the others, recapitulating everything I had discovered, pointing out the blank tablet reserved for Earth.

Mayer listened, broke away and wandered off, staring up dully at the megaliths.

"Quaine, you've really found something," he muttered softly. "Must be some sort of temple."

I followed him round, wiping the sweat off my face and shielding my eyes from the glare reflected off the great slabs.

"Look at them, Mayer! They've been coming here for ten thousand years! Do you know what this means?"

Mayer tentatively reached out and touched one of the megaliths. "'Argive League xxv . . . Beta Tri-'" he read out. "There are others then. God Almighty. What do you think they look like?"

"What does it matter? Listen. They must have levelled this plateau themselves, scooped out the basin and cut these tablets from the living rock. Can you even imagine the tools they used?"

We crouched in the narrow rectangle of shadow in the lee of the sunward megalith. The temperature climbed, now that it was forty-five minutes to noon, to 105°.

"What is all this, though?" Mayer asked. "Their burial ground?"

"Unlikely. Why leave a tablet for Earth? If they've been able to learn our language they'd know the gesture was pointless. Anyway, elaborate burial customs are a sure sign of decadence, and there's something here that suggests the exact opposite. I'm convinced they expect that some time in the future we'll take an active part in whatever is celebrated here."

"Maybe, but what? Think in new categories, remember?" Mayer squinted up at the megaliths. "This could be anything from an ethnological bill of lading to the guest list at an all-time cosmic house party."

He noticed something, frowned, then suddenly wrenched away from me. He leapt to his feet, pressed his hands against the surface of the slab behind us and ran his eyes carefully over the grain.

"What's worrying you?" I asked.

"Shut up!" he snapped. He scratched his thumbnail at the surface, trying to dislodge a few grains. "What are you talking about, Quaine, these slabs aren't made of stone!"

He slipped out his jack knife, sprung the blade and stabbed viciously at the megalith, slashing a two-foot long groove across the inscriptions.

I stood up and tried to restrain him but he shouldered me away and ran his finger down the groove, collecting a few fragments.

He turned on me angrily. "Do you know what this is? *Tantalum oxide*! Pure ninety-nine per cent paygold. No wonder our extraction rates are fantastically small. I couldn't understand it, but these people—" he jerked his thumb furiously at the megaliths "—have damn well milked the planet dry to build these crazy things!"

It was 115°. The air was beginning to turn yellow and we were breathing in short exhausted pants.

"Let's get back to the truck," I temporised. Mayer was losing control, carried away by his rage. With his big burly shoulders hunched in anger, staring up blindly at the five great megaliths, face contorted by the heat, he looked like an insane sub-man pinned in the time trophy of a galactic super-hunter.

He was ranting away as we stumbled through the dust towards the half-track.

"What do you want to do?" I shouted. "Cut them down and put them through your ore crushers?"

Mayer stopped, the blue dust swirling about his legs. The air was humming as the basin floor expanded in the heat. The half-track was only fifty yards away, its refrigerated cabin a cool haven.

Mayer was watching me, nodding slowly. "It could be done. Ten tons of Hy-Dyne planted round those slabs would crack them into small enough pieces for a tractor to handle. We could store them out at the observatory, then sneak them later into my refining tanks."

I walked on, shaking my head with a thin grin. The heat was hitting Mayer, welling up all the irrational bitterness of a year's frustration. "It's an idea. Why don't you get in touch with Gamma Grus? Maybe they'll give you the lease."

"I'm serious, Quaine," Mayer called after me. "In a couple of years we'd be rich men."

"You're crazy!" I shouted back at him. "The sun's boiling your brains."

I began to scale the slope up to the rim. The next hour in the cabin was going to be difficult, cooped up with a maniac eager to tear the stars apart. The butt of the flare pistol swinging on my knee caught my eye; a poor weapon, though, against Mayer's physique.

I had climbed almost up to the rim when I heard his feet thudding through the dust. I started to turn round just as he was on me, swinging a tremendous blow that struck me on the back of the head. I fell, watched him close in and then stood up, my skull exploding, and grappled with him. We stumbled over each other for a moment, the walls of the basin diving around us like a switchback, and then he knocked my hands away and smashed a heavy right cross into my face.

I fell on my back, stunned by the pain; the blow seemed to have loosened my jaw and damaged all the bones on the left side of my face. I managed to sit up and saw Mayer running past. He reached one hand to the rim, pulled himself up and lurched over to the half-track.

I dragged the flare pistol out its holster, snapped back the bolt and trained it at Mayer. He was thirty yards away, turning the near-side door handle. I held the butt with both hands and fired as he opened the door. He looked round at the sharp detonation and watched the silver shell soar swiftly through the air towards him, ready to duck.

The shell missed him by three feet and exploded against the cabin roof. There was a brilliant flash of light that resolved itself a fraction of a second later into a fireball of incandescent magnesium vapour ten feet in diameter. This slowly faded to reveal the entire driving cabin, hood and forward side-panels of the half-track burning strongly with a loud, heavy crackling. Out of this maelstrom suddenly plunged the figure of Mayer, moving with violent speed, blackened arms across his face. He tripped over the rim, catapulted down into the dust and rolled for about twenty yards before he finally lay still, a shapeless bundle of smoking rags.

I looked numbly at my wrist-watch. It was ten minutes to noon. The temperature was 130°. I pulled myself to my feet and trudged slowly up the slope towards the half-track, head thudding like a volcano, uncertain whether I would be strong enough to lift myself out of the basin.

When I was ten feet from the rim I could see that the wind-shield of the half-track had melted and was dripping like jelly onto the dash board.

I dropped the flare pistol and turned round.

It was five minutes to noon. Around me, on all sides,

enormous sheets of fire were cascading slowly from the sky, passing straight through the floor of the basin, and then rising again in an inverted torrent. The megaliths were screened by curtains of brilliant light and were no longer visible, but I groped forward, following the slope, searching for what shade would still be among them.

Twenty yards further on I saw that the sun was directly overhead. It expanded until the disc was as wide as the basin, and then lowered itself to about ten feet above my head, a thousand rivers of fire streaming across its surface in all directions. There was a terrifying roaring and barking noise, overlaid by a dull, massive pounding as all the volcanos in the volcano jungle began to erupt again. I walked on, in a dream, shuffling slowly, eyes closed to shut out the furnace around me. Then I discovered that I was sitting on the floor of the basin, which started to spin, setting up a high-pitched screaming.

A strange vision swept like a flame through my mind.

For aeons I plunged, spiralling weightlessly through a thousand whirling vortices, swirled and buffeted down chasmic eddies, splayed out across the disintegrating matrix of the continuum, a dreamless ghost in flight from the cosmic Now. Then a million motes of light prickled the darkness above me, illuminating enormous curving causeways of time and space veering out past the stars to the rim of the galaxy. My dimensions shrank to a metaphysical extension of astral zero, I was propelled upwards to the stars. Aisles of light broke and splintered around me. I passed Aldebaran, soared over Betelgeuse and Vega, zoomed past Antares, finally halted a hundred light years above the crown of Conopus.

Epochs drifted. Time massed on gigantic fronts, colliding like crippled universes. Abruptly, the infinite worlds of tomorrow unfolded before me—ten thousand years, a hundred thousand, unnumbered millenia raced past me in a blur of light, an iridescent cataract of stars and nebulae, interlaced by flashing trajectories of flight and exploration,

I entered deep time.

Deep Time: 1,000,000 mega-years. I saw the Milky Way, a wheeling carousel of fire, and Earth's remote descendants, countless races inhabiting every stellar system in the galaxy. The dark areas between the stars were a continuously flickering field of light, a gigantic phosphorescent ocean, filled with the vibrating pulses of electromagnetic communication pathways.

To cross the enormous voids between the stars they have progressively slowed their physiological time, first ten, then a hundred-fold, so accelerating stellar and galactic time. Space has become alive with transient swarms of comets and meteors, the constellations have begun to dislocate and shift, the slow majestic rotation of the universe itself is at last visible.

Deep Time: 10,000,000 mega-years. Now they have left the Milky Way, which has started to fragment and dissolve. To reach the island galaxies they have further slowed their time schemes by a factor of 10,000, and can thus communicate with each other across vast inter-galactic distances in a subjective period of only a few years. Continuously expanding into deep space, they have extended their physiological dependence upon electronic memory banks which store the atomic and molecular patterns within their bodies, transmit them outwards at the speed of light, and later re-assemble them.

Deep Time: 100,000,000 mega-years. They have spread now to all the neighbouring galaxies, swallowing thousands of nebulae. Their time schemes have decelerated a million-fold, they have become the only permanent forms in an ever-changing world. In a single instant of their lives a star emerges and dies, a sub-universe is born, a score of planetary life systems evolve and vanish. Around them the universe sparkles and flickers with myriad points of light, as untold numbers of constellations appear and fade.

Now, too, they have finally shed their organic forms and are composed of radiating electromagnetic fields, the primary energy substratum of the universe, complex networks of multiple dimensions, alive with the constant tremor of the sentient messages they carry, bearing the life-ways of the race.

To power these fields, they have harnessed entire galaxies riding the wave-fronts of the stellar explosions out towards the terminal helixes of the universe.

Deep Time: 1,000,000,000 mega-years. They are beginning to dictate the form and dimensions of the universe. To girdle the distances which circumscribe the cosmos they have reduced their time period to 0.00000001 of its previous phase. The great galaxies and spiral nebulae which once seemed to live for eternity are now of such brief duration that they are no longer visible. The universe is now almost filled by the great vibrating mantle of ideation, a vast shimmering harp which has completely translated itself into pure wave form, independent of any generating source.

As the universe pulses slowly, its own energy vortices flexing and dilating, so the force-fields of the ideation mantle flex and dilate in sympathy, growing like an embryo within the

womb of the cosmos, a child which will soon fill and consume its parent.

Deep Time: 10,000,000,000 mega-years. The ideation-field has now swallowed the cosmos, substituted its own dynamic, its own spatial and temporal dimensions. All primary time and energy fields have been engulfed. Seeking the final extension of itself within its own bounds the mantle has reduced its time period to an almost infinitesimal $0.00000000 \dots n$ of its previous interval. Time has virtually ceased to exist, the ideation-field is nearly stationary, infinitely slow eddies of sentience undulating outward across its mantles.

Ultimately it achieves the final predicates of time and space, eternity and infinity, and slows to absolute zero. Then with a cataclysmic eruption it disintegrates, no longer able to contain itself. Its vast energy patterns begin to collapse, the whole system twists and thrashes in its mortal agony, thrusting outwards huge cataracts of fragmenting energy. In parallel, time emerges.

Out of this debris the first proto-galactic fields are formed, coalescing to give the galaxies and nebulae, the stars encircled by their planetary bodies. Among these, from the elemental seas, based on the carbon atom, emerge the first living forms.

So the cycle renews itself . . .

The stars swam, their patterns shifting through a dozen constellations. Novas flooded the darkness like blinding arcs, revealing the familiar profiles of the Milky Way, the constellations Orion, Coma Berenices, Cygnus.

Lowering my eyes from the storm-tossed sky I saw the five megaliths. I was back on Murak. Around me the basin was filled with a great concourse of silent figures, ranged upwards along the darkened slopes, shoulder to shoulder in endless ranks, like spectators in a spectral arena.

Beside me a voice spoke, and it seemed to have told me everything I had witnessed of the great cosmic round.

Just before I sank into consciousness for the last time I tried to ask the question ever-present in my drifting mind, but it answered before I spoke, the star-littered sky, the five megaliths and the watching multitude spinning and swirling away into a dream as it said:

"Meanwhile we wait here, at the threshold of time and space, celebrating the identity and kinship of the particles within our bodies with those of the sun and the stars, of our brief private times with the vast periods of the galaxies, with the total unifying time of the cosmos . . ."

I woke lying face downwards in the cool evening sand,

shadows beginning to fill the basin, the thermal winds blowing a crisp refreshing breeze across my head and back. Below, the megaliths rose up into the thin blue air, their lower halves cut by the shadow-line of the sinking sun. I lay quietly, stirring my legs and arms tentatively, conscious of the gigantic rifts that had been driven through my mind. After a few minutes I pulled myself to my feet and gazed round at the slopes curving away from me, the memory of the insane vision vivid in my mind.

The vast concourse that had filled the basin, the dream of the cosmic cycle, the voice of my interlocutor—were still real to me, a world in parallel I had just stepped from, and the door to which hung somewhere in the air around me.

Had I dreamed everything, assembling the entire fantasy in my mind as I lay raving in the noon heat, saved by some thermodynamic freak of the basin's architecture?

I held my thermo-alarm up to the fading light, checking the maximum and minimum levels. The maximum read: 162°. Yet I had survived! I felt relaxed, restored, almost rejuvenated. My hands and face was unburnt—a temperature of over 160° would have boiled the flesh off my bones, left my skin a blackened crisp.

Over my shoulder I noticed the half-track standing on the rim. I ran towards it, for the first time remembering Mayer's death. I felt my cheekbones, testing my jaw muscles. Surprisingly Mayer's heavy punches had left no bruise.

Mayer's body had gone! A single line of footsteps led down from the half-track to the megaliths, but otherwise the carpet of light blue dust was untouched. Mayer's prints, all marks of our scuffle, had vanished.

I quickly scaled the rim and reached the half-track, peering under the chassis and between the tracks. I flung open the cabin door, found the compartment empty.

The windshield was intact. The paintwork on the door and hood was unmarked, the metal trim around the windows unscratched. I dropped to my knees, vainly searched for any flakes of magnesium ash. On my knee the flare pistol lodged securely in its holster, a primed star shell in the breach.

I left the Chrysler, jumped down into the basin and ran over to the megaliths. For an hour I paced round them, trying to resolve the countless questions that jammed my mind.

Just before I left I went over to the fifth tablet. I looked up at the top left corner, wondering whether I would have qualified for its first entry had I died that afternoon.

A single row of letters, filled with shadow by the falling light, stood out clearly.

I stepped back and craned up at them. There were the

symbols of the four alien languages, and then, proudly against the stars:

CHARLES FOSTER NELSON EARTH AD 2217

"Tell me, Quaine, where would you like to be when the world ends?"

In the seven years since Tallis first asked me this question I must have re-examined it a thousand times. Somehow it seems the key to all the extraordinary events that have happened on Murak, with their limitless implications for the people of Earth (to me a satisfactory answer contains an acceptable statement of one's philosophy and beliefs, an adequate discharge of the one moral debt we owe ourselves and the universe).

Not that the world is about to 'end.' The implication is rather that it has already ended and regenerated itself an infinite number of times, and that the only remaining question is what to do with ourselves in the meantime. The four stellar races who built the megaliths chose to come to Murak. What exactly they are waiting for here I can't be certain. A cosmic redeemer, perhaps, the first sight of the vast mantle of ideation I glimpsed in my vision. Recalling the period of two million years Tallis cited for life to appear on Murak it may be that the next cosmic cycle will receive its impetus here, and that we are advance spectators, five kings come to attend the genesis of a super-species which will soon outstrip us.

That there are others here, invisible and sustained by preternatural forces, is without doubt. Apart from the impossibility of surviving a Murak noon, I certainly didn't remove Mayer's body from the basin and arrange to have him electrocuted by one of the data-processing units at the observatory. Nor did I conceive the vision of the cosmic cycle myself.

It looks as if the two geologists stumbled upon the Waiting Grounds, somehow divined their significance, and then let Tallis in on their discovery. Perhaps they disagreed, as Mayer and I did, and Nelson may have been forced to kill his companion, to die himself a year later in the course of his vigil.

Like Tallis I shall wait here if necessary for fifteen years. I go out to the Grounds once a week and watch them from the observatory the rest of the time. So far I have seen nothing, although two or three hundred more names have been added to the tablets. However, I am certain that whatever we are waiting for will soon arrive. When I get tired or impatient, as

I sometimes do, I remind myself that they have been coming to Murak and waiting here, generation upon generation, for 10,000 years.

Whatever it is, it must be worth waiting for.

DEEP END

They always slept during the day. By dawn the last of the townsfolk had gone indoors and the houses would be silent, heat curtains locked across the windows, as the sun rose over the deliquescing salt banks, filling the streets with opaque fire. Most of them were old people and fell asleep quickly in their darkened chalets, but Granger, with his restless mind and his one lung, often lay awake through the afternoons, while the metal outer walls of the cabin creaked and hummed, trying pointlessly to read through the old log books Holliday had salvaged for him from the crashed space platforms.

By six o'clock the thermal fronts would begin to recede southwards across the kelp flats, and one by one the air-conditioners in the bedrooms switched themselves off. While the town slowly came to life, its windows opening to the cool dusk air, Granger strode down to breakfast at the Neptune Bar, gallantly doffing his sunglasses to left and right at the elderly couples settling themselves out on their porches, staring at each other across the shadow-filled streets.

Five miles to the north, in the empty hotel at Idle End, Holliday usually rested quietly for another hour, and listened to the coral towers, gleaming in the distance like white pagodas, sing and whistle as the temperature gradients cut through them. Twenty miles away he could see the symmetrical peak of Hamilton, nearest of the Bermuda Islands, rising off the dry ocean floor like a flat-topped mountain, the narrow ring of white beach still visible in the sunset, a scum-line left by sinking ocean.

That evening he felt even more reluctant than usual to drive down into the town. Not only would Granger be in his private booth at the Neptune, dispensing the same mixture of humour and homily—he was virtually the only person Holli-

day could talk to, and inevitably he had come to resent his dependence on the older man—but Holliday would have his final interview with the migration officer and make the decision which would determine his entire future.

In a sense the decision had already been made, as Bullen, the migration officer, had realised on his trip a month earlier. He did not bother to press Holiday, who had no special skills to offer, no qualities of character or leadership which would be of use on the new worlds. However, Bullen pointed out one small but relevant fact, which Holliday duly noted and thought over in the intervening month.

"Remember, Holliday," he warned him at the end of the interview in the requisitioned office at the rear of the sheriff's cabin, "the average age of the settlement is over sixty. In ten years' time you and Granger may well be the only two left here, and if that lung of his goes you'll be on your own."

He paused to let this prospect sink in, then added quietly:

"All the kids are leaving on the next trip—the Merryweathers' two boys, Tom Juranda (*That lout! Good riddance*, Holliday thought to himself. *Look out, Mars*)—do you realise you'll literally be the only one here under the age of fifty?"

"Katy Summers is staying," Holliday pointed out quickly, the sudden vision of a white organdy dress and long straw hair giving him courage.

The migration officer had glanced at his application list and nodded grudgingly. "Yes, but she's just looking after her grandmother. As soon as the old girl dies Katy will be off like a flash. After all, there's nothing to keep her here, is there?"

"No," Holliday had agreed automatically.

There wasn't now. For a long while he had mistakenly believed there was. Katy was his own age, twenty-two, the only person, apart from Granger, who seemed to understand his determination to stay behind and keep watch over a forgotten Earth. But the grandmother died three days after the migration officer left, and the next day Katy had begun to pack. In some insane way Holliday had assumed that she would stay behind, and what worried him was that all his assumptions about himself might be based on equally false premises.

Climbing off the hammock, he went onto the terrace and looked out at the phosphorescent glitter of the trace minerals in the salt banks stretching away from the hotel. His quarters were in the penthouse suite on the tenth floor, the only heat-sealed unit in the building, but its steady settlement into the ocean bed had opened in the load walls wide cracks which would soon reach up to the roof. The ground floor had already disappeared. By the time the next floor went—six months at the outside—he would have been forced to leave the old

pleasure resort and return to the town. Inevitably, that would mean sharing a chalet with Granger.

A mile away, an engine droned. Through the dusk Holliday saw the migration officer's helicopter whirling along towards the hotel, the only local landmark, then veer off once Bullen identified the town and brake slowly towards the landing strip.

Eight o'clock, Holliday noted. His interview was at 8:30 the next morning. Bullen would rest the night with the sheriff, carry out his other duties as graves commissioner and justice of the peace, and then set off after seeing Holliday on the next leg of his journey. For twelve hours Holliday was free, still able to make absolute decisions (or, more accurately, not to make them) but after that he would have committed himself. This was the migration officer's last trip, his final circuit from the deserted cities near St. Helena up through the Azores and Bermudas round to the main Atlantic ferry site at the Canaries. Only two of the big launching platforms were still in navigable orbit—hundreds of others were continuously falling out of the sky—and once they came down Earth was, to all intents, abandoned. From then on the only people likely to be picked up would be a few military communications personnel.

Twice on his way into the town Holliday had to lower the salt plough fastened to the front bumper of the jeep and ram back the drifts which had melted across the wire roadway during the afternoon. Mutating kelp, their gene-shifts accelerated by the radio-phosphorus, reared up into the air on either side of the road like enormous cacti, turning the dark salt banks into a white lunar garden. But this evidence of the encroaching wilderness only served to strengthen Holliday's need to stay behind on Earth. Most of the nights, when he wasn't arguing with Granger at the Neptune, trying to explain his philosophy to him, he would drive around the ocean floor, climbing over the crashed launching platforms, or wander with Katy Summers through the kelp forests. Sometimes he would persuade Granger to come with them, hoping that the older man's expertise—he had originally been a marine biologist—would help to sharpen his own awareness of the bathypelagic flora, but the original sea bed was buried under the endless salt hills and they might as well have been driving about the Sahara.

As he entered the Neptune—a low cream and chromium saloon which abutted the landing strip and had formerly served as a passenger lounge when thousands of migrants from the Southern Hemisphere were being shipped up to the Canaries—Granger called out to him and rattled his cane

against the window, pointing to the dark outline of the migration officer's helicopter parked on the apron fifty yards away.

"I know," Holliday said in a bored voice as he went over with his drink. "Relax, I saw him coming."

Granger grinned at him. Holliday, with his intent serious face under an unruly thatch of blond hair, and his absolute sense of personal responsibility, always amused him.

"You relax," Granger said, adjusting the shoulder pad under his Hawaiian shirt which disguised his sunken lung. (He had lost it skin-diving thirty years earlier.) "I'm not going to fly to Mars next week."

Holliday stared sombrely into his glass. "I'm not either." He looked up at Granger's wry saturnine face, then added sardonically, "Or didn't you know?"

Granger roared, tapping the window with his cane as if to dismiss the helicopter. "Seriously, you're not going? You've made up your mind?"

"Wrong. And right. I haven't made up my mind yet—but at the same time I'm not going. You appreciate the distinction?"

"Perfectly, Dr. Schopenhauer." Granger began to grin again. He pushed away his glass. "You know, Holliday, your whole trouble is that you take yourself too seriously. You don't realise how ludicrous you are."

"Ludicrous? Why?" Holliday asked guardedly.

"What does it matter whether you've made up your mind or not? The only thing that counts now is to get together enough courage to head straight for the Canaries and take off into the wide blue yonder. For heaven's sake, what are you staying for? Earth is dead and buried. Past, present and future no longer exist here. Don't you feel any responsibility to your own biological destiny?"

"Spare me that." Holliday pulled a ration card from his shirt pocket and passed it across to Granger, who was responsible for the stores allocations. "I need a new pump on the lounge refrigerator. 30-watt Frigidaire. Any left?"

Granger groaned, took the card with a snort of exasperation. "Good God, man, you're just a Robinson Crusoe in reverse, tinkering about with all these bits of old junk, trying to fit them together. You're the last man on the beach who decides to stay behind after everyone else has left. Maybe you are a poet and dreamer, but don't you realise that those two species are extinct now?"

Holliday stared out at the helicopter on the apron, at the lights of the settlement reflected against the salt hills that encircled the town. Each day they moved in a little further.

Already it was difficult to get together a weekly squad to push them back. In ten years' time his position might well be that of a Crusoe. Luckily the big water and kerosene tanks—giant cylinders, the size of gasometers—held enough for fifty years. Without them, of course, he would have had no choice.

"Let's give me a rest," he said to Granger. "You're merely trying to find in me a justification for your own enforced stay. Perhaps I am extinct, but I'd rather cling to life here than vanish completely. Anyway, I have a hunch that one day they'll be coming back. Someone's got to stay behind and keep alive a sense of what life here has meant. This isn't an old husk we can throw away when we've finished with it. We were born here. It's the only place we really remember."

Granger nodded slowly. He was about to speak when a brilliant white arc crossed the darkened window, then soared out of sight, its point of impact with the ground lost behind one of the storage tanks.

Holliday stood up and craned out of the window.

"Must be a launching platform. Looked like a big one, probably one of the Russians'." A long rolling crump reverberated through the night air, echoing away among the coral towers. Flashes of light flared up briefly. There was a series of smaller explosions, and then a wide diffuse pall of steam fanned out across the northwest.

"Lake Atlantic," Granger commented. "Let's drive out there and have a look. It may have uncovered something interesting."

Half an hour later, with a set of Granger's old sample beakers, slides and mounting equipment in the back seat, they set off in the jeep towards the southern tip of Lake Atlantic ten miles away.

It was here that Holliday discovered the fish.

Lake Atlantic, a narrow ribbon of stagnant brine ten miles in length by a mile wide, to the north of the Bermuda Islands, was all that remained of the former Atlantic Ocean, and was, in fact, the sole remnant of the oceans which had once covered two-thirds of the Earth's surface. The frantic mining of the oceans in the previous century to provide oxygen for the atmospheres of the new planets had made their decline swift and irreversible, and with their death had come climatic and other geophysical changes which ensured the extinction of Earth itself. As the oxygen extracted electrolytically from sea water was compressed and shipped away, the hydrogen released was discharged into the atmosphere. Eventually only a narrow layer of denser, oxygen-containing air was left, little more than a mile in depth, and those people remaining on

Earth were forced to retreat into the ocean beds, abandoning the poisoned continental tables.

At the hotel at Idle End, Holliday spent uncounted hours going through the library he had accumulated of magazines and books about the cities of the old Earth, and Granger often described to him his own youth when the seas had been half-full and he had worked as a marine biologist at the University of Miami, a fabulous laboratory unfolding itself for him on the lengthening beaches.

"The seas are our corporate memory," he often said to Holliday. "In draining them we deliberately obliterated our own pasts, to a large extent our own self-identities. That's another reason why you should leave. Without the sea, life is unsupportable. We become nothing more than the ghosts of memories, blind and homeless, flitting through the dry chambers of a gutted skull."

They reached the Lake within half an hour, and worked their way through the swamps which formed its banks. In the dim light the grey salt dunes ran on for miles, their hollows cracked into hexagonal plates, a dense cloud of vapour obscuring the surface of the water. They parked on a low promontory by the edge of the lake and looked up at the great circular shell of the launching platform. This was one of the larger vehicles, almost 300 yards in diameter, lying upside down in the shallow water, its hull dented and burnt, riven by huge punctures where the power plants had torn themselves loose on impact and exploded off across the lake. A quarter of a mile away, hidden by the blur, they could just see a cluster of rotors pointing up into the sky.

Walking along the bank, the main body of the lake on their right, they moved nearer the platform, tracing out its rivetted CCCP markings along the rim. The giant vehicle had cut enormous grooves through the nexus of pools just beyond the tip of the lake, and Granger waded through the warm water, searching for specimens. Here and there were small anemones and starfish, stunted bodies twisted by cancers. Weblike algae draped themselves over his rubber boots, their nuclei beading like jewels in the phosphorescent light. They paused by one of the largest pools, a circular basin 300 feet across, draining slowly as the water poured out through a breach in its side. Granger moved carefully down the deepening bank, forking specimens into the rack of beakers, while Holliday stood on the narrow causeway between the pool and the lake, looking up at the dark overhang of the space platform as it loomed into the darkness above him like the stern of a ship.

He was examining the shattered air-lock of one of the crew

domes when he saw something suddenly move across the surface of the deck. For a moment he imagined that he had seen a passenger who had somehow survived the vehicle's crash, then realised that it was merely the reflection in the aluminised skin of a ripple in the pool behind him.

He turned around to see Granger, ten feet below him, up to his knees in the water, staring out carefully across the pool.

"Did you throw something?" Granger asked quietly.

Holliday shook his head. "No." Without thinking, he added: "Must have been a fish jumping."

"Fish? There isn't a single fish alive on the entire planet. The whole zoological class died out ten years ago. Funny, though."

Just then the fish jumped again.

For a few moments, standing motionless in the half-light, they watched it together, as its slim silver body leapt frantically out of the tepid shallow water, its short glistening arcs carrying it to and fro across the pool.

"Dog-fish," Granger muttered. "Shark family. Highly adaptable. It would need to be, to have survived here. Damn it, it may well be the only fish still living."

Holliday moved down the bank, his feet sinking in the oozing mud. "Isn't the water too salty?"

Granger bent down and scooped up some of the water, sipped it tentatively. "Saline, but comparatively dilute." He glanced over his shoulder at the lake. "Perhaps there's continuous evaporation off the lake surface and local condensation here. A freak distillation couple." He slapped Holliday on the shoulder. "Holliday, this should be interesting."

The dog-fish was leaping frantically towards them, its two-foot body twisting and flicking. Low mud banks were emerging all over the surface of the pool; in only a few places towards the centre was the water more than a foot deep.

Holliday pointed to the breach in the bank fifty yards away, gestured Granger after him and began to run towards it.

Five minutes later they had effectively dammed up the breach. Then Holliday returned for the jeep and drove it carefully through the winding saddles between the pools. He lowered the ramp and began to force the sides of the fish pool in towards each other. After two or three hours he had narrowed the diameter from a hundred yards to under sixty, and the depth of the water had increased to over two feet. The dog-fish had ceased to jump and swam smoothly just below the surface, snapping at the countless small plants which had been tumbled into the water by the jeep's ramp. Its slim white body seemed white and unmarked, the small fins trim and powerful.

Granger sat on the hood of the jeep, his back against the windshield, watching Holliday with admiration.

"You obviously have hidden reserves," he said ungrudgingly. "I didn't think you had it in you."

Holliday washed his hands in the water, then stepped over the churned mud which formed the boundary of the pool. A few feet behind him the dog-fish veered and lunged.

"I want to keep it alive," Holliday said matter-of-factly. "Don't you see, Granger, the fish stayed behind when the first amphibians emerged from the seas two hundred million years ago, just as you and I, in turn, are staying behind now. In a sense all fish are images of ourselves seen in the sea's mirror."

He slumped down on the running board. His clothes were soaked and streaked with salt, and he gasped at the damp air. To the east, just above the long bulk of the Florida coastline, rising from the ocean floor like an enormous aircraft carrier, were the first dawn thermal fronts. "Will it be all right to leave it until this evening?"

Granger climbed into the driving seat. "Don't worry. Come on, you need a rest." He pointed up at the overhanging rim of the launching platform. "That should shade it for a few hours, help to keep the temperature down."

As they neared the town Granger slowed to wave to the old people retreating from their porches, fixing the shutters on the steel cabins.

"What about your interview with Bullen?" he asked Holliday soberly. "He'll be waiting for you."

"Leave here? After last night? It's out of the question."

Granger shook his head as he parked the car outside the Neptune. "Aren't you rather overestimating the importance of one dog-fish? There were millions of them once; they were the vermin of the sea."

"You're missing the point," Holliday said, sinking back into the seat, trying to wipe the salt out of his eyes. "That fish means that there's still something to be done here. Earth isn't dead and exhausted after all. We can breed new forms of life, a completely new biological kingdom."

Eyes fixed on this private vision, Holliday sat holding the steering wheel while Granger went into the bar to collect a crate of beer. On his return the migration officer was with him.

Bullen put a foot on the running board, looked into the car. "Well, how about it, Holliday? I'd like to make an early start. If you're not interested I'll be off. There's a rich new life out there; it's the first step to the stars. Tom Juranda and

the Merryweather boys are leaving next week. Do you want to be with them?"

"Sorry," Holliday said curtly. He pulled the crate of beer into the car and let out the clutch, then gunned the jeep away down the empty street in a roar of dust.

Half an hour later, as he stepped out onto the terrace at Idle End, cool and refreshed after his shower, he watched the helicopter roar overhead, its black propeller scudding, then disappear over the kelp flats towards the hull of the wrecked space platform.

"Come on, let's go! What's the matter?"

"Hold it," Granger said. "You're getting overeager. Don't interfere too much, you'll kill the damn thing with kindness. What have you got there?" He pointed to the can Holliday had placed in the dashboard compartment.

"Bread crumbs."

Granger sighed, then gently closed the door. "I'm impressed. I really am. I wish you'd look after me this way. I'm gasping for air too."

They were five miles from the lake when Holliday leaned forward over the wheel and pointed to the crisp tire-prints in the soft salt flowing over the road ahead.

"Someone's there already."

Granger shrugged. "What of it? They've probably gone to look at the platform." He chuckled quietly. "Don't you want to share the New Eden with anyone else? Or just you alone, and a consultant biologist?"

Holliday laughed. "Those platforms annoy me, the way they're hurled down as if Earth were a garbage dump. Still, if it wasn't for this one I wouldn't have found the fish."

They reached the lake and made their way towards the pool, the erratic track of the car ahead winding in and out of the pools. Two hundred yards from the platform it had been parked, blocking the route for Holliday and Granger, its passengers having gone ahead on foot.

"That's the Merryweathers' car," Holliday said as they walked around the big stripped-down Buick, slashed with yellow paint and fitted with sirens and pennants. "The two boys must have come out here."

Granger pointed. "One of them's up on the platform."

The younger brother had scaled onto the rim and was shouting down like an umpire at the antics of two other boys, one his brother, the other Tom Juranda, a tall broad-shouldered youth in a space cadet's jerkin. They were standing at the edge of the fish pool, stones and salt blocks in their hands, hurling them into the pool.

Leaving Granger, Holliday sprinted on ahead, shouting at the top of his voice. Too preoccupied to hear him, the boys continued to throw their missiles into the pool, while the younger Merryweather egged them on from the platform above. Just before Holliday reached them Tom Juranda ran a few yards along the bank and began to kick the mud-wall into the air, then resumed his target throwing.

"Juranda! Get away from there!" Holliday bellowed. "Put those stones down!"

He reached Juranda as the youth was about to hurl a brick-sized lump of salt into the pool, seized him by the shoulder and flung him round, knocking the salt out of his hand into a shower of damp crystals, then lunged at the elder Merryweather boy, kicking him away.

The pool had been drained. A deep breach had been cut through the bank and the water had poured out into the surrounding gulleys and pools. Down in the centre of the basin, in a litter of stones and spattered salt, was the crushed but still wriggling body of the dog-fish, twisting itself helplessly in the bare inch of water that remained. Dark red blood poured from wounds in its body, staining the salt.

Holliday hurled himself at Juranda, shook the youth savagely by the shoulders.

"Juranda! Do you realise what you've done, you—" Exhausted, Holliday released him and staggered down into the centre of the pool, kicked away the stones and stood looking at the fish twitching spasmodically at his feet.

"Sorry, Holliday," the older Merryweather boy said tentatively behind him. "We didn't know it was your fish."

Holliday waved him away, then let his arms fall limply to his sides. He felt numbed and baffled, unable to resolve his anger and frustration.

Tom Juranda suddenly began to laugh, and shouted something derisively. Their tension broken, the boys turned and ran off together across the dunes towards their car, yelling and playing catch with each other, mimicking Holliday's outrage.

Granger let them go by, then walked across to the pool, wincing when he saw the empty basin.

"Holliday," he called. "Come on, man."

Holliday shook his head, his eyes staring at the beaten body of the fish.

Granger stepped down the bank to him. Sirens hooted in the distance as the Buick roared off. "Those damn children." He took Holliday gently by the arm. "I'm sorry," he said quietly. "But it's not the end of the world."

Bending down, Holliday reached towards the fish, lying still

now, the mud around it slick with blood. His hands hesitated, then retreated.

"Nothing we can do, is there?" he said impersonally.

Granger examined the fish. Apart from the large wound in its side and the flattened skull the skin was intact. "Why not have it stuffed?" he suggested seriously.

Holliday stared at him incredulously, his face contorting. For a moment he said nothing. Then, almost berserk, he shouted: "Have it stuffed? Are you crazy? Do you think I want to make a dummy of myself, fill my own head with straw?"

Turning on his heel, he shouldered past Granger and swung himself roughly out of the pool.

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