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Penguin Science Fiction

Edited by Brian Aldiss

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PENGUIN SCIENCE FICTION
Edited by Brian W. Aldiss

Brian Aldiss, who is literary editor of the *Oxford Mail*, was elected President of the British Science Fiction Association in 1960. He was born in Norfolk in 1925 and spent his childhood on the east coast and in Devon. Joining the Royal Signals in 1943 he saw action in Burma, as well as close-up views of snakes and utterly silent dying jungles. After the war he toured South Eastern Asia, and then for ten years became a bookseller in Oxford. In 1955 he won the *Observer* Short Story Competition and took to writing full time. He has great faith in science fiction as a vehicle for ideas and excitement. Books he has published, in Britain and America, include: *The Brightfount Diaries; Non-Stop; Space, Time and Nathaniel; Galaxies Like Grains of Sand;* and *Equator.* He has also edited *More Penguin Science Fiction* and *Yet More Penguin Science Fiction.* Such spare time as he has he devotes to painting, swimming, talking, and eating curry.

Penguin Science Fiction

An anthology edited by

BRIAN W. ALDISS

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Introduction

THE shortest ghost story ever written – or so schoolboys used to tell each other in the thirties – goes like this:

The last man alive in the world sat all alone in his house. Suddenly the front door bell rang . . .

Today this is no longer the shortest ghost story. It has become the shortest science fiction story. When we read it, we no longer think of a spectral visitor in cerements prodding that bell with a bony or transparent digit. The finger is now a metal finger . . . or something bluish, perhaps, that hardly resembles a human finger at all – a pseudopod, shall we say, or a visiting tentacle.

Our imaginings and horrors are – inevitably – pitched in a new key. Compared with the simple world of the thirties, when we managed so happily (or unhappily) without most plastics, without antibiotics, tape recorders, space probes, detergents, transistors, television, computers, nuclear fission, and brainwashing, we live today in an age of science fiction.

For most of us, this is a tolerable era, despite its international alarms and the threat of pushbutton warfare. As the tempo of living increases, however, the celestial being that watches over us seems more and more like a Time and Motion Study man. Our predominant gods and ghouls are scientific.

The stories presented here are not scientific. Rather, they are stories which we can enjoy because of the possibilities science has opened up; which is an important distinction. They need little effort to read – indeed, I admit that I find them irresistible.

Science fiction – the fact needs emphasizing – is no more written for scientists and technologists than ghost stories were written for ghosts. We shall see why in a minute.

Only two considerations have gone towards the selection of these stories. Firstly, that they please as stories, and secondly that they please as an anthology; which is to say, that they demonstrate

some of the great variety of reading that lurks behind the curious label 'science fiction'.

Science fiction – 'SF' to its adherents – concerns anything that has not happened; it may be something that is very likely to happen, or something that is very unlikely to happen. Either case depends on an 'if', and in either case, by the rules of the game, the author must persuade you that it could happen. If he does not make this attempt, then he is probably writing fantasy rather than SF. George Orwell's *Animal Farm* is fantasy, whereas his *1984* is SF.

If you are interested in a more formal definition of SF, Edmund Crispin, the most expert SF anthologist in this country, has one to offer. 'An SF story,' he says, 'is one which presupposes a technology, or an effect of technology, or a disturbance in the natural order, such as humanity up to the time of writing has not in actual fact experienced.'

It sounds impressive. Yet I often feel it represents as much what Mr Crispin wishes SF was, as, with all its variety, SF actually is.

For it is apparent (though I have never seen anyone mention the fact) that two main streams flow through SF, the scientific and the whimsical. Or the empiric and the runcible, if you prefer. These two streams often mingle inseparably in one story (as in *Skirmish* or even *Command Performance* contained here), but to distinguish them they are best named after their two most notable exponents and called the Wellsian and the Carrollian. My contention is that SF owes a greater debt to Lewis Carroll than to H. G. Wells; which is why I believe that its appeal is more to the layman than the boffin.

A wonderland, that's SF, a realm of the curious, through which a twentieth-century reader wanders like a terylene-clad Alice. Myself, I like this facet of SF greatly, preferring it to the sort of 'Popular Science' side. I'd as lief hear how crazy the world is as how fast it progresses technologically.

In one of the stories included here – Clifford Simak's *Skirmish* – is a sentence that may be relished as at once nicely scaring and typically science-fictional. The hero is confronted by a small rat-

like machine. 'There was no sign of eyes, no hint of face, and yet he knew it stared.' This is a frightening little machine indeed; but are we so far away from the surrealism of the Cheshire Cat when Alice 'noticed a curious appearance in the air: it puzzled her very much at first, but, after watching it a minute or two, she made it out to be a grin'?

And again, in *Nightfall* (written by Isaac Asimov, one of the best-loved SF authors), when men of a very different civilization from ours are discussing what existence might be like on other worlds, one of them says, 'Supposing you had a planet with only one sun . . .' Then he adds reluctantly 'You couldn't expect life – which is fundamentally dependent upon light – to develop under those conditions.' Bearing in mind the strange circumstances existing on his world, we see how he feels, even while we are enjoying an object lesson in mistaking a limited human point of view for a universal truth.

You will discover the same type of comment in *Through the Looking-Glass*, in that momentous meeting between human and alien when the Unicorn's

> eye happened to fall upon Alice; he turned round instantly, and stood for some time looking at her with an air of the deepest disgust.
>
> 'What – is – this?' he said at last.
>
> 'This is a child!' Haigha replied eagerly, coming in front of Alice to introduce her, and spreading out both his hands towards her in an Anglo-Saxon attitude. 'We only found it today. It's as large as life and twice as natural!'
>
> 'I always thought they were fabulous monsters,' said the Unicorn. 'Is it alive?'
>
> 'It can talk,' said Haigha, solemnly.
>
> The Unicorn looked dreamily at Alice and said, 'Talk, child.'
>
> Alice could not help her lips curling into a smile as she began: 'Do you know, I always thought Unicorns were fabulous monsters too! I never saw one alive before!'
>
> 'Well, now that we *have* seen each other,' said the Unicorn, 'if you'll believe in me, I'll believe in you. Is that a bargain?'

This mood of innocent wonder is very open to attack. We of this generation are a knowing lot, and dislike being thought

unsophisticated. Yet at the base of all true wisdom lies a sense of wonder.

I peddle no party line. These stories have been chosen simply because I like them and think that the average fiction reader will like them too; most of them I have read many times; mainly I enjoy them for the sense of wonder they give me.

Before mentioning these tales more specifically, I should say that they are all but one culled from the SF magazines of the last twenty years. These magazines have been and are the life blood of SF. As John Carnell, the editor of three such magazines, remarked recently, 'Without *New Worlds* and *Science Fantasy* as natural outlets for the original publication of short stories and some novel-length material, many a hard-cover collection or novel would never be born.' Which of course applies equally to this Penguin selection; an anthologist's debt is to all the magazines rather than just those mentioned in the acknowledgements.

SF magazines as such have been on the market since 1928; when an SF boom occurred in the early fifties, over forty of them were circulating at the same time in England and America. Now their numbers are down to under a dozen. From this vast crop, among much dull material, many gems lie awaiting the patient researcher.

The twelve stories included here range in time from far into the past to far into the future. They include many of the staples of SF, immortality, time travel, aliens, strange worlds, weird vegetables, and telepathy; there is even a vignette on space travel, although space travel features much less prominently in SF than is popularly supposed. Each subject has been approached in an unorthodox way – notably in Algis Budry's brilliant account of one of the chief drawbacks to immortality.

There are indeed even a couple of entirely new themes lurking in this book. Eric Frank Russell – whose stories over the last quarter century have been as consistently inspired as anyone else's in the SF field – is the first, surely, to devote a whole tale to what he refers to as 'the ultimate scientist'. And Jim Ballard, an up-and-coming British author, deals with the new science of microsonics; he has used it to point the fine irony of his tale and

to give us those 'gigantic flaccid waves, each more lumbering and enveloping than the last' which I find so memorable. This, of course, is as it should be; a writer's business is to digest new things and make imaginative experience of them. My own story, *Poor Little Warrior!*, began as an attempt to bring to imaginative life a dinosaur bone I saw in a museum.

But if these stories have new themes, what of that genuinely funny story without wisecracks, *The Snowball Effect*? In outline, it's simple: a new formula is developed, and this is what happens. It is hardly a new theme; but did you ever read another story like *The Snowball Effect*? It bears the hallmark of the best science fiction stories: it is inimitable. How accurate its horrifying behind-the-scenes glimpse of an American university is, I prefer not to know. At least it couldn't happen in Oxford – one hopes.

The Snowball Effect is a joke – the best sort of joke, a solemn one. But science fiction has many moods; if you don't believe it capable of examining straightforwardly an ordinary human problem and remaining science fiction, you are advised to turn straight to that beautiful cautionary tale entitled *Lot*.

Of course Bertram Chandler also deals with an ordinary human problem. Like Eric Frank Russell, Chandler has been writing since the early forties; but for a life of action – at present he is First Mate on an Australian coaster – he might have become one of the great writers of science fiction. As it is, he has a long list of excellent tales behind him. The one included here is set in space. Chandler has remembered what many writers forget: that human beings travelling in space will not necessarily shed human characteristics; they will still place undue importance on minor details – like, for instance, a cuff link. So he produces a tale of cunning simplicity.

Here also, if you are looking for them, you can glimpse wider preoccupations: adolescent behaviour in *Lot*; or mob psychology (in Steinbeck's fable); religion (Russell); the possibilities of symbiosis (Schmitz); the quest for individuality (Aldiss); the urge for knowledge (Asimov); while in *Command Performance* you have a portrait of a woman as actual as any in science fiction.

In this latter story there is evidence of that force and vision which Walter Miller has lately brought to bear on his incomparable novel *A Canticle for Leibowitz*.

Any stories succeed by their value as (thoughtful) entertainment, and by the interest and excitement they arouse, rather than by their underlying intentions. So with this dozen stories. They are stimulants, not tracts.

Read them, as the excellent phrase has it, 'just for the hell of it'. After all, science fiction authors write, in the main, just for the hell of it. We like to see how many curious ideas we can turn up. We enjoy giving our own and our readers' imaginations an airing. We are goaded on by that word 'if'. 'Why,' as the White Queen said, 'sometimes I've believed as many as six impossible things before breakfast.'

Oxford, July 1960 BRIAN W. ALDISS

Sole Solution

ERIC FRANK RUSSELL

HE brooded in darkness and there was no one else. Not a voice, not a whisper. Not the touch of a hand. Not the warmth of another heart.

Darkness.

Solitude.

Eternal confinement where all was black and silent and nothing stirred. Imprisonment without prior condemnation. Punishment without sin. The unbearable that had to be borne unless some mode of escape could be devised.

No hope of rescue from elsewhere. No sorrow or sympathy or pity in another soul, another mind. No doors to be opened, no locks to be turned, no bars to be sawn apart. Only the thick, deep sable night in which to fumble and find nothing.

Circle a hand to the right and there is nought. Sweep an arm to the left and discover emptiness utter and complete. Walk forward through the darkness like a blind man lost in a vast, forgotten hall and there is no floor, no echo of footsteps, nothing to bar one's path.

He could touch and sense one thing only. And that was self.

Therefore the only available resources with which to overcome his predicament were those secreted within himself. He must be the instrument of his own salvation.

How?

No problem is beyond solution. By that thesis science lives. Without it, science dies. He was the ultimate scientist. As such, he could not refuse this challenge to his capabilities.

His torments were those of boredom, loneliness, mental

and physical sterility. They were not to be endured. The easiest escape is via the imagination. One hangs in a straitjacket and flees the corporeal trap by adventuring in a dreamland of one's own.

But dreams are not enough. They are unreal and all too brief. The freedom to be gained must be genuine and of long duration. That meant he must make a stern reality of dreams, a reality so contrived that it would persist for all time. It must be self-perpetuating. Nothing less would make escape complete.

So he sat in the great dark and battled the problem. There was no clock, no calendar to mark the length of thought. There were no external data upon which to compute. There was nothing, nothing except the workings within his agile mind.

And one thesis: no problem is beyond solution.

He found it eventually. It meant escape from everlasting night. It would provide experience, companionship, adventure, mental exercise, entertainment, warmth, love, the sound of voices, the touch of hands.

The plan was anything but rudimentary. On the contrary it was complicated enough to defy untangling for endless aeons. It had to be like that to have permanence. The unwanted alternative was swift return to silence and the bitter dark.

It took a deal of working out. A million and one aspects had to be considered along with all their diverse effects upon each other. And when that was done he had to cope with the next million. And so on . . . on . . . on.

He created a mighty dream of his own, a place of infinite complexity schemed in every detail to the last dot and comma. Within this he would live anew. But not as himself. He was going to dissipate his person into numberless parts, a great multitude of variegated shapes and forms each of

which would have to battle its own peculiar environment.

And he would toughen the struggle to the limit of endurance by unthinking himself, handicapping his parts with appalling ignorance and forcing them to learn afresh. He would seed enmity between them by dictating the basic rules of the game. Those who observed the rules would be called good. Those who did not would be called bad. Thus there would be endless delaying conflicts within the one great conflict.

When all was ready and prepared he intended to disrupt and become no longer one, but an enormous concourse of entities. Then his parts must fight back to unity and himself.

But first he must make reality of the dream. Ah, that was the test!

The time was now. The experiment must begin.

Leaning forward, *he* gazed into the dark and said, 'Let there be light.'

And there was light.

Lot

WARD MOORE

MR JIMMON even appeared elated, like a man about to set out on a vacation.

'Well, folks, no use waiting any longer. We're all set. So let's go.'

There was a betrayal here; Mr Jimmon was not the kind of man who addressed his family as 'folks'.

'David, you're sure . . .?'

Mr Jimmon merely smiled. This was quite out of character; customarily he reacted to his wife's habit of posing unfinished questions – after seventeen years the unuttered and larger part of the queries were always instantly known to him in some mysterious way, as though unerringly projected by the key in which the introduction was pitched, so that not only the full wording was communicated to his mind, but the shades and implications which circumstance and humour attached to them – with sharp and querulous defence. No matter how often he resolved to stare quietly or use the still more effective, Afraid I didn't catch your meaning, dear, he had never been able to put his resolution into force. Until this moment of crisis. Crisis, reflected Mr Jimmon, still smiling and moving suggestively towards the door, crisis changes people. Brings out underlying qualities.

It was Jir who answered Molly Jimmon, with the adolescent's half-whine of exasperation. 'Aw furcrysay Mom, what's the idea? The highways'll be clogged tight. What's the good figuring out everything heada time and having everything all set if you're going to start all over again

at the last minute? Get a grip on yourself and let's go.'

Mr Jimmon did not voice the reflexive, That's no way to talk to your Mother. Instead he thought, not unsympathetically, of woman's slow reaction time. Asset in childbirth, liability behind the wheel. He knew Molly was thinking of the house and all the things in it: her clothes and Erika's, the TV set – so sullenly ugly now, with the electricity gone – the refrigerator in which the food would soon begin to rot and stink, the dead stove, the cellarful of cases of canned stuff for which there was no room in the station wagon. And the Buick, blocked up in the garage, with the air thoughtfully let out of the tyres and the battery hidden.

Of course the house would be looted. But they had known that all along. When they – or rather he, for it was his executive's mind and training which were responsible for the Jimmons' preparation against this moment – planned so carefully and providentially, he had weighed property against life and decided on life. No other decision was possible.

'Aren't you at least going to phone Pearl and Dan?'

Now why in the world, thought Mr Jimmon, completely above petty irritation, should I call Dan Davisson? (Because of course it's *Dan* she means – My Old Beau. Oh, he was nobody then, just an impractical dreamer without a penny to his name; it wasn't for years that he was recognized as a Mathematical Genius; now he's a professor and all sorts of things – but she automatically says Pearl-and-Dan, not Dan.) What can Dan do with the square root of minus nothing to offset M equals whatever it is, at this moment? Or am I supposed to ask if Pearl has all her diamonds? Query, why doesn't Pearl wear pearls? Only diamonds? My wife's friends, heh heh, but even the subtlest intonation won't label them when you're entertaining an important client and Pearl and Dan.

And why should I phone? What sudden paralysis afflicts her? Hysteria?

'No,' said Mr Jimmon. 'I did not phone Pearl and Dan.'

Then he added, relenting. 'Phone's been out since.'

'But,' said Molly.

She's hardly going to ask me to drive into town. He selected several answers in readiness. But she merely looked towards the telephone helplessly (she ought to have been fat, thought Mr Jimmon, really she should, or anyway plump; her thinness gives her that air of competence), so he amplified gently, 'They're unquestionably all right. As far away from it as we are.'

Wendell was already in the station wagon. With Waggie hidden somewhere. Should have sent the dog to the humane society; more merciful to have it put to sleep. Too late now; Waggie would have to take his chance. There were plenty of rabbits in the hills above Malibu, he had often seen them quite close to the house. At all events there was no room for a dog in the wagon, already loaded to within a pound of its capacity.

Erika came in briskly from the kitchen, her brown jodhpurs making her appear at first glance even younger than fourteen. But only at first glance; then the swell of hips and breast denied the childishness the jodhpurs seemed to accent.

'The water's gone, Mom. There's no use sticking around any longer.'

Molly looked incredulous. 'The water?'

'Of course the water's gone,' said Mr Jimmon, not impatiently, but rather with satisfaction in his own foresight. 'If It didn't get the aqueduct, the mains depend on pumps. Electric pumps. When the electricity went, the water went too.'

'But the water,' repeated Molly, as though this last

catastrophe was beyond all reason – even the outrageous logic which It brought in its train.

Jir slouched past them and outside. Erika tucked in a strand of hair, pulled her jockey cap downward and sideways, glanced quickly at her mother and father, then followed. Molly took several steps, paused, smiled vaguely in the mirror and walked out of the house.

Mr Jimmon patted his pockets; the money was all there. He didn't even look back before closing the front door and rattling the knob to be sure the lock had caught. It had never failed, but Mr Jimmon always rattled it anyway. He strode to the station wagon, running his eyes over the springs to reassure himself again that they really hadn't overloaded it.

The sky was overcast; you might have thought it one of the regular morning high fogs if you didn't know. Mr Jimmon faced south-east, but It had been too far away to see anything. Now Erika and Molly were in the front seat; the boys were in the back lost amid the neatly packed stuff. He opened the door on the driver's side, got in, turned the key and started the motor. Then he said casually over his shoulder, 'Put the dog out, Jir.'

Wendell protested, too quickly, 'Waggie's not here.'

Molly exclaimed, 'Oh, David . . .'

Mr Jimmon said patiently, 'We're losing pretty valuable time. There's no room for the dog; we have no food for him. If we had room we could have taken more essentials; those few pounds might mean the difference.'

'Can't find him,' muttered Jir.

'He's not here. I tell you he's not here,' shouted Wendell, tearful voiced.

'If I have to stop the motor and get him myself we'll be wasting still more time and gas.' Mr Jimmon was still detached, judicial. 'This isn't a matter of kindness to animals. It's life and death.'

Erika said evenly, 'Dad's right, you know. It's the dog or us. Put him out, Wend.'

'I tell you –' Wendell began.

'Got him!' exclaimed Jir. 'Okay, Waggie! Outside and good luck.'

The spaniel wriggled ecstatically as he was picked up and put out through the open window. Mr Jimmon raced the motor, but it didn't drown out Wendell's anguish. He threw himself on his brother, hitting and kicking. Mr Jimmon took his foot off the gas, and as soon as he was sure the dog was away from the wheels, eased the station wagon out of the driveway and down the hill towards the ocean.

'Wendell, Wendell, stop,' pleaded Molly. 'Don't hurt him, Jir.'

Mr Jimmon clicked on the radio. After a preliminary hum, clashing static crackled out. He pushed all five buttons in turn, varying the quality of unintelligible sound. 'Want me to try?' offered Erika. She pushed the manual button and turned the knob slowly. Music dripped out.

Mr Jimmon grunted. 'Mexican station. Try something else. Maybe you can get Ventura.'

They rounded a tight curve. 'Isn't that the Warbinns'?' asked Molly.

For the first time since It happened Mr Jimmon had a twinge of impatience. There was no possibility, even with the unreliable eye of shocked excitement, of mistaking the Warbinns' blue Mercury. No one else on Rambla Catalina had one anything like it, and visitors would be most unlikely now. If Molly would apply the most elementary logic!

Besides, Warbinn had stopped the blue Mercury in the Jimmon driveway five times every week for the past two months – ever since they had decided to put the Buick up and keep the wagon packed and ready against this moment

– for Mr Jimmon to ride with him to the city. Of course it was the Warbinns'.

'... *advised not to impede the progress of the military. Adequate medical staffs are standing by at all hospitals. Local civilian defence units are taking all steps in accordance...*'

'Santa Barbara,' remarked Jir, nodding at the radio with an expert's assurance.

Mr Jimmon slowed, prepared to follow the Warbinns down to 101, but the Mercury halted and Mr Jimmon turned out to pass it. Warbinn was driving and Sally was in the front seat with him; the back seat appeared empty except for a few things obviously hastily thrown in. No foresight, thought Mr Jimmon.

Warbinn waved his hand vigorously out the window and Sally shouted something.

'... *panic will merely slow rescue efforts. Casualties are much smaller than originally reported...*'

'How do they know?' asked Mr Jimmon, waving politely at the Warbinns.

'Oh, David, aren't you going to stop? They want something.'

'Probably just to talk.'

'... *to retain every drop of water. Emergency power will be in operation shortly. There is no cause for undue alarm. General...*'

Through the rear-view mirror Mr Jimmon saw the blue Mercury start after them. He had been right then, they only wanted to say something inconsequential. At a time like this.

At the junction with U.S. 101 five cars blocked Rambla Catalina. Mr Jimmon set the handbrake, and steadying himself with the open door, stood tiptoe twistedly, trying to see over the cars ahead. 101 was solid with traffic which barely moved. On the southbound side of the divided highway a stream of vehicles flowed illegally north.

'Thought everybody was figured to go east,' gibed Jir over the other side of the car.

Mr Jimmon was not disturbed by his son's sarcasm. How right he'd been to rule out the trailer. Of course the bulk of the cars were headed eastward as he'd calculated; this sluggish mass was nothing compared with the countless ones which must now be blocking the roads to Pasadena, Alhambra, Garvey, Norwalk. Even the northbound refugees were undoubtedly taking 99 or regular 101 – the highway before them was really 101 Alternate – he had picked the most feasible exit.

The Warbinns drew up alongside. 'Hurry didn't do you much good,' shouted Warbinn, leaning forward to clear his wife's face.

Mr Jimmon reached in and turned off the ignition. Gas was going to be precious. He smiled and shook his head at Warbinn; no use pointing out that he'd got the inside lane by passing the Mercury, with a better chance to seize the opening on the highway when it came. 'Get in the car, Jir, and shut the door. Have to be ready when this breaks.'

'If it ever does,' said Molly. 'All that rush and bustle. We might just as well . . .'

Mr Jimmon was conscious of Warbinn's glowering at him and resolutely refused to turn his head. He pretended not to hear him yell. 'Only wanted to tell you you forgot to pick up your bumper-jack. It's in front of our garage.'

Mr Jimmon's stomach felt empty. What if he had a flat now? Ruined, condemned. He knew a burning hate for Warbinn – incompetent borrower, bad neighbour, thoughtless, shiftless, criminal. He owed it to himself to leap from the station wagon and seize Warbinn by the throat . . .

'What did he say, David? What is Mr Warbinn saying?'

Then he remembered it was the jack from the Buick; the station wagon's was safely packed where he could get at it

easily. Naturally he would never have started out on a trip like this without checking so essential an item. 'Nothing,' he said, 'nothing at all.'

'... *plane dispatches indicate target was the Signal Hill area. Minor damage was done to Long Beach, Wilmington, and San Pedro. All non-military air traffic warned from Mines Field ...*'

The smash and crash of bumper and fender sounded familiarly on the highway. From his look-out station he couldn't see what had happened, but it was easy enough to reconstruct the impatient jerk forward that caused it. Mr Jimmon didn't exactly smile, but he allowed himself a faint quiver of internal satisfaction. A crash up ahead would make things worse, but a crash behind – and many of them were inevitable – must eventually create a gap.

Even as he thought this, the first car at the mouth of Rambla Catalina edged on to the shoulder of the highway. Mr Jimmon slid back in and started the motor, inching ahead after the car in front, gradually leaving the still uncomfortable proximity of the Warbinns.

'Got to go to the toilet,' announced Wendell abruptly.

'Didn't I tell you – ! Well, hurry up ! Jir, keep the door open and pull him in if the car starts to move.'

'I can't go here.'

Mr Jimmon restrained his impulse to snap, Hold it in then. Instead he said mildly, 'This is a crisis, Wendell. No time for niceties. Hurry.'

'... *the flash was seen as far north as Ventura and as far south as Newport. An eye-witness who has just arrived by helicopter ...*'

'That's what we should have had,' remarked Jir. 'You thought of everything except that.'

'That's no way to speak to your father,' admonished Molly.

'Aw heck, Mom, this is a crisis. No time for niceties.'

'You're awful smart, Jir,' said Erika. 'Big, tough, brutal man.'

'Go down, brat,' returned Jir, 'your nose needs wiping.'

'As a matter of record,' Mr Jimmon said calmly, 'I thought of both plane and helicopter and decided against them.'

'I can't go. Honest, I just can't go.'

'Just relax, darling,' advised Molly. 'No one is looking.'

'. . . *fires reported in Compton, Lynwood, Southgate, Harbour City, Lomita, and other spots are now under control. Residents are advised not to attempt to travel on the overcrowded highways as they are much safer in their homes or places of employment. The civilian defence . . .*'

The two cars ahead bumped forward. 'Get in,' shouted Mr Jimmon.

He got the left front tyre of the station wagon on the asphalt shoulder – the double lane of concrete was impossibly far ahead – only to be blocked by the packed procession. The clock on the dash said 11.04. Nearly five hours since It happened, and they were less than two miles from home. They could have done better walking. Or on horseback.

'. . . *All residents of the Los Angeles area are urged to remain calm. Local radio service will be restored in a matter of minutes, along with electricity and water. Reports of fifth column activities have been greatly exaggerated. The FBI has all known subversives under . . .*'

He reached over and shut it off. Then he edged a daring two inches further on the shoulder, almost grazing an aggressive Cadillac packed solid with cardboard cartons. On his left a Model A truck shivered and trembled. He knew, distantly and disapprovingly, that it belonged to two painters who called themselves man and wife. The truckbed was loaded high with household goods; poor, useless things no looter would bother to steal. In the cab the artists passed a

quart beer bottle back and forth. The man waved it genially at him; Mr Jimmon nodded discouragingly back.

The thermometer on the mirror showed 90. Hot all right. Of course if they ever got rolling . . . I'm thirsty, he thought; probably suggestion. If I hadn't seen the thermometer. Anyway I'm not going to paw around in back for the canteen. Forethought. Like the arms. He cleared his throat. 'Remember there's an automatic in the glove compartment. If anyone tries to open the door on your side, use it.'

'Oh, David, I . . .'

Ah, humanity. Non-resistance. Gandhi. I've never shot at anything but a target. At a time like this. But they don't understand.

'I could use the rifle from back here,' suggested Jir. 'Can I, Dad?'

'I can reach the shotgun,' said Wendell. 'That's better at close range.'

'Gee, you men are brave,' jeered Erika. Mr Jimmon said nothing; both shotgun and rifle were unloaded. Foresight again.

He caught the hiccuping pause in the traffic instantly, gratified at his smooth coordination. How far he could proceed on the shoulder before running into a culvert narrowing the highway to the concrete he didn't know. Probably not more than a mile at most, but at least he was off Rambla Catalina and on 101.

He felt tremendously elated. Successful.

'Here we go!' He almost added, Hold on to your hats.

Of course the shoulder too was packed solid, and progress, even in low gear, was maddening. The gas consumption was something he did not want to think about; his pride in the way the needle of the gauge caressed the F shrank. And gas would be hard to come by in spite of his pocketful of ration coupons. Black market.

'Mind if I try the radio again?' asked Erika, switching it on.

Mr Jimmon, following the pattern of previous success, insinuated the left front tyre on to the concrete, eliciting a disapproving squawk from the Pontiac alongside. '... *sector was quiet. Enemy losses are estimated* ...'

'Can't you get something else?' asked Jir. 'Something less dusty?'

'Wish we had TV in the car,' observed Wendell. 'Joe Tellifer's old man put a set in the back seat of their Chrysler.'

'Dry up, squirt,' said Jir. 'Let the air out of your head.'

'Jir.'

'Oh, Mom, don't pay attention! Don't you see that's what he wants?'

'Listen, brat, if you weren't a girl, I'd spank you.'

'You mean, if I wasn't your sister. You'd probably enjoy such childish sex-play with any other girl.'

'Erika!'

Where do they learn it? marvelled Mr Jimmon. These progressive schools. Do you suppose ...?

He edged the front wheel further in exultantly, taking advantage of a momentary lapse of attention on the part of the Pontiac's driver. Unless the other went berserk with frustration and rammed into him, he practically had a cinch on a car-length of the concrete now.

'Here we go!' he gloried. 'We're on our way.'

'Aw, if I was driving we'd be half-way to Oxnard by now.'

'Jir, that's no way to talk to your father.'

Mr Jimmon reflected dispassionately that Molly's ineffective admonitions only spurred Jir's sixteen-year-old brashness, already irritating enough in its own right. Indeed, if it were not for Molly, Jir might ...

It was of course possible – here Mr Jimmon braked just short of the convertible ahead – Jir wasn't just going through

a 'difficult' period (What was particularly difficult about it? he inquired, in the face of all the books Molly suggestively left around on the psychological problems of growth. The boy had everything he could possibly want) but was the type who, in different circumstances drifted well into – well, perhaps not exactly juvenile delinquency, but . . .

'. . . *in the Long Beach-Wilmington-San Pedro area. Comparison with that which occurred at Pittsburgh reveals that this morning's was in every way less serious. All fires are now under control and all the injured are now receiving medical attention . . .*'

'I don't think they're telling the truth,' stated Mrs Jimmon.

He snorted. He didn't think so either, but by what process had she arrived at that conclusion?

'I want to hear the ball game. Turn on the ball game, Rick,' Wendell demanded.

Eleven sixteen, and rolling northward on the highway. Not bad, not bad at all. Foresight. Now if he could only edge his way leftward to the southbound strip they'd be beyond the Santa Barbara bottleneck by two o'clock.

'The lights,' exclaimed Molly, 'the taps!'

Oh no, thought Mr Jimmon, not that too. Out of the comic strips.

'Keep calm,' advised Jir. 'Electricity and water are both off – remember?'

'I'm not quite an imbecile yet, Jir. I'm quite aware everything went off. I was thinking of the time it went back on.'

'Furcrysay, Mom, you worrying about next month's bills *now*?'

Mr Jimmon, nudging the station wagon ever leftward formed the sentence: You'd never worry about bills, young man, because you never have to pay them. Instead of saying it aloud, he formed another sentence: Molly, your talent

for irrelevance amounts to genius. Both sentences gave him satisfaction.

The traffic gathered speed briefly, and he took advantage of the spurt to get solidly in the left-hand lane, right against the long island of concrete dividing the north from the southbound strips. 'That's using the old bean, Dad,' approved Wendell.

Whatever slight pleasure he might have felt in his son's approbation was overlaid with exasperation. Wendell, like Jir, was more Manville than Jimmon; they carried Molly's stamp on their faces and minds. Only Erika was a true Jimmon. Made in my own image, he thought pridelessly.

'I can't help but think it would have been at least courteous to get in touch with Pearl and Dan. At least *try*. And the Warbinns . . .'

The gap in the concrete divider came sooner than he anticipated and he was on the comparatively unclogged southbound side. His foot went down on the accelerator and the station wagon grumbled earnestly ahead. For the first time Mr Jimmon became aware how tightly he'd been gripping the wheel; how rigid the muscles in his arms, shoulders and neck had been. He relaxed part-way as he adjusted to the speed of the cars ahead and the speedometer needle hung just below 45, but resentment against Molly (at least courteous), Jir (no time for niceties), and Wendell (not to go), rode up in the saliva under his tongue. Dependent. Helpless. Everything on him. Parasites.

At intervals Erika switched on the radio. News was always promised immediately, but little was forthcoming, only vague, nervous attempts to minimize the extent of the disaster and soothe listeners with allusions to civilian defence, military activities on the ever advancing front, and comparison with the destruction of Pittsburgh, so vastly much worse than the comparatively harmless detonation at

Los Angeles. Must be pretty bad, thought Mr Jimmon; cripple the war effort . . .

'I'm hungry,' said Wendell.

Molly began stirring around, instructing Jir where to find the sandwiches. Mr Jimmon thought grimly of how they'd have to adjust to the absence of civilized niceties: bread and mayonnaise and lunch meat. Live on rabbit, squirrel, abalone, fish. When Wendell grew hungry he'd have to get his own food. Self-sufficiency. Hard and tough.

At Oxnard the snarled traffic slowed them to a crawl again. Beyond, the juncture with the main highway north kept them at the same infuriating pace. It was long after two when they reached Ventura, and Wendell, who had been fidgeting and jumping up and down in the seat for the past hour, proclaimed, 'I'm tired of riding.'

Mr Jimmon set his lips. Molly suggested, ineffectually, 'Why don't you he down, dear?'

'Can't. Way this crate is packed, ain't room for a grasshopper.'

'Verry funny. Verrrry funny,' said Jir.

'Now, Jir, leave him alone! He's just a little boy.'

At Carpenteria the sun burst out. You might have thought it the regular dissipation of the fog, only it was almost time for the fog to come down again. Should he try the San Marcos Pass after Santa Barbara, or the longer, better way? Flexible plans, but . . . Wait and see.

It was four when they got to Santa Barbara and Mr Jimmon faced concerted though unorganized rebellion. Wendell was screaming with stiffness and boredom; Jir remarked casually to no one in particular that Santa Barbara was the place they were going to beat the bottleneck oh yeh; Molly said, Stop at the first clean-looking gas station. Even Erika added, 'Yes, Dad, you'll really have to stop.'

Mr Jimmon was appalled. With every second priceless and

hordes of panic-stricken refugees pressing behind, they would rob him of all the precious gains he'd made by skill, daring, judgement. Stupidity and shortsightedness. Unbelievable. For their own silly comfort – good lord, did they think they had a monopoly on bodily weaknesses? He was cramped as they and wanted to go as badly. Time and space which could never be made up. Let them lose this half-hour and it was quite likely they'd never get out of Santa Barbara.

'If we lose a half-hour now we'll never get out of here.'

'Well, now, David, that wouldn't be utterly disastrous, would it? There are awfully nice hotels here and I'm sure it would be more comfortable for everyone than your idea of camping in the woods, hunting and fishing . . .'

He turned off State; couldn't remember name of the parallel street, but surely less traffic. He controlled his temper, not heroically, but desperately. 'May I ask how long you would propose to stay in one of these awfully nice hotels?'

'Why, until we could go home.'

'My dear Molly . . .' What could he say? My dear Molly, we are never going home, if you mean Malibu? Or: My dear Molly, you just don't understand what is happening?

The futility of trying to convey the clear picture in his mind. Or any picture. If she could not of herself see the endless mob pouring, pouring out of Los Angeles, searching frenziedly for escape and refuge, eating up the substance of the surrounding country in ever-widening circles, crowding, jam-packing, overflowing every hotel, boarding-house, lodging, or private home into which they could edge, agonizedly bidding up the price of everything until the chaos they brought with them was indistinguishable from the chaos they were fleeing – if she could not see all this instantly and automatically, she could not be brought to see it at all. Any more than the other aimless, planless, improvident fugitives could see it.

So, my dear Molly; nothing.

Silence gave consent to continued expostulation. 'David, do you really mean you don't intend to stop at *all*?'

Was there any point in saying, Yes I do? He set his lips still more tightly and once more weighed San Marcos Pass against the coast route. Have to decide now.

'Why, the time we're waiting here, just waiting for the cars up ahead to move would be enough.'

Could you call her stupid? He weighed the question slowly and justly, alert for the first jerk of the massed cars all around. Her reasoning was valid and logical if the laws of physics and geometry were suspended. (Was that right – physics and geometry? Body occupying two different positions at the same time?) It was the facts which were illogical – not Molly. She was just exasperating.

By the time they were half-way to Gaviota or Goleta – Mr Jimmon could never tell them apart – foresight and relentless sternness began to pay off. Those who had left Los Angeles without preparation and in panic were dropping out or slowing down, to get gas or oil, repair tyres, buy food, seek rest rooms. The station wagon was steadily forging ahead.

He gambled on the old highway out of Santa Barbara. Any kind of obstruction would block its two lanes; if it didn't he would be beating the legions on the wider, straighter road. There were stretches now where he could hit 50; once he sped a happy half-mile at 65.

Now the insubordination crackling all around gave indication of simultaneous explosion. 'I really,' began Molly, and then discarded this for a fresher, firmer start. 'David, I don't understand how you can be so utterly selfish and inconsiderate.'

Mr Jimmon could feel the veins in his forehead begin to swell, but this was one of those rages that didn't show.

'But, Dad, would ten minutes ruin everything?' asked Erika.

'Monomania,' muttered Jir. 'Single track. Like Hitler.'

'I want my dog,' yelped Wendell. 'Dirty old dog-killer.'

'Did you ever hear of cumulative – ' Erika had addressed him reasonably; surely he could make her understand? 'Did you ever hear of cumulative ...' What was the word? Snowball rolling downhill was the image in his mind. 'Oh, what's the use?'

The old road rejoined the new; again the station wagon was fitted into the traffic like parquetry. Mr Jimmon, from an exultant, unfettered – almost – 65 was imprisoned in a treadmill set at 38. Keep calm; you can do nothing about it, he admonished himself. Need all your nervous energy. Must be wrecks up ahead. And then, with a return of satisfaction: if I hadn't used strategy back there we'd have been with those making 25. A starting-stopping 25.

'It's fantastic,' exclaimed Molly. 'I could almost believe Jir's right and you've lost your mind.'

Mr Jimmon smiled. This was the first time Molly had ever openly showed disloyalty before the children or sided with them in their presence. She was revealing herself. Under pressure. Not the pressure of events; her incredible attitude at Santa Barbara had demonstrated her incapacity to feel that. Just pressure against the bladder.

'No doubt those left behind can console their last moments with pride in their sanity.' The sentence came out perfectly formed, with none of the annoying pauses or interpolated 'ers' or 'mmphs' which could, as he knew from unhappy experience, flaw the most crushing rejoinders.

'Oh, the end can always justify the means for those who want it that way.'

'Don't they restrain people – '

'That's enough, Jir!'

Trust Molly to return quickly to fundamental hypocrisy; the automatic response – his mind felicitously grasped the phrase, conditioned reflex – to the customary stimulus. She had taken an explicit stand against his common sense, but her rigid code – honour thy father; iron rayon the wrong side; register and vote; avoid scenes; only white wine with fish; never re-hire a discharged servant – quickly substituted pattern for impulse. Seventeen years.

The road turned away from the ocean, squirmed inland and uphill for still slower miles; abruptly widened into a divided, four lane highway. Without hesitation Mr Jimmon took the southbound side; for the first time since they had left Rambla Catalina his foot went down to the floorboards and with a sigh of relief the station wagon jumped into smooth, ecstatic speed.

Improvisation and strategy again. And, he acknowledged generously, the defiant example this morning of those who'd done the same thing in Malibu. Now, out of re-established habit the other cars kept to the northbound side even though there was nothing coming south. Timidity, routine, inertia. Pretty soon they would realize sheepishly that there was neither traffic nor traffic cops to keep them off, but it would be miles before they had another chance to cross over. By that time he would have reached the comparatively uncongested stretch.

'It's dangerous, David.'

Obey the law. No smoking. Keep off the grass. Please adjust your clothes before leaving. Trespassers will be. Picking California wildflowers or shrubs is forbidden. Parking 45 min. Do not.

She hadn't put the protest in the more usual form of a question. Would that technique have been more irritating? Isn't it *dan*gerous, Day-vid? His calm conclusion: it didn't matter.

'No time for niceties,' chirped Jir.

Mr Jimmon tried to remember Jir as a baby. All the bad novels he had read in the days when he read anything except *Time* and the *New Yorker*, all the movies he'd seen before they had a TV set, always prescribed such retrospection as a specific for softening the present. If he could recall David Alonzo Jimmon, junior, at six months, helpless and lovable, it should make Jir more acceptable by discovering some faint traces of the one in the other.

But though he could recreate in detail the interminable, disgusting, trembling months of that initial pregnancy (had he really been afraid she would die?) he was completely unable to reconstruct the appearance of his first-born before the age of . . . It must have been at six that Jir had taken his baby sister out for a walk and lost her. (Had Molly permitted it? He still didn't know for sure.) Erika hadn't been found for four hours.

The tidal screeching of sirens invaded and destroyed his thoughts. What the devil . . .? His foot lifted from the gas pedal as he slewed obediently to the right, ingrained reverence surfacing at the sound.

'I told you it wasn't safe! Are you really trying to kill us all?'

Whipping over the rise ahead, a pair of motor-cycles crackled. Behind them snapped a long line of assorted vehicles, fire-trucks and ambulances mostly, interspersed here and there with olive drab army equipment. The cavalcade flicked down the central white line, one wheel in each lane. Mr Jimmon edged the station wagon as far over as he could; it still occupied too much room to permit the free passage of the onrush without compromise.

The knees and elbows of the motor-cycle policemen stuck out widely, reminding Mr Jimmon of grasshoppers. The one on the near side was headed straight for the station wagon's

left front fender; for a moment Mr Jimmon closed his eyes as he plotted the unswerving course, knifing through the crust-like steel, bouncing lightly on the tyres, and continuing unperturbed. He opened them to see the other officer shoot past, mouth angrily open in his direction while the one straight ahead came to a skidding stop.

'Going to get it now,' gloated Wendell.

An old-fashioned parent, one of the horrible examples held up to shuddering moderns like himself, would have reached back and relieved his tension by clouting Wendell across the mouth. Mr Jimmon merely turned off the motor.

The cop was not indulging in the customary deliberate and ominous performance of slowly dismounting and striding towards his victim with ever more menacing steps. Instead he got off quickly and covered the few feet to Mr Jimmon's window with unimpressive speed.

Heavy goggles concealed his eyes; dust and stubble covered his face. 'Operator's licence!'

Mr Jimmon knew what he was saying, but the sirens and the continuous rustle of the convoy prevented the sound from coming through. Again the cop deviated from the established routine; he did not take the proffered licence and examine it incredulously before drawing out his pad and pencil, but wrote the citation, glancing up and down from the card in Mr Jimmon's hand.

Even so, the last of the vehicles – *San Jose F.D.* – passed before he handed the summons through the window to be signed. 'Turn around and proceed in the proper direction,' he ordered curtly, pocketing the pad and buttoning his jacket briskly.

Mr Jimmon nodded. The officer hesitated, as though waiting for some limp excuse. Mr Jimmon said nothing.

'No tricks,' said the policeman over his shoulder. 'Turn around and proceed in the proper direction.'

He almost ran to his motor-cycle, and roared off, twisting his head for a final stern frown as he passed, siren wailing. Mr Jimmon watched him dwindle in the rear-view mirror and then started the motor. 'Gonna lose a lot more than you gained,' commented Jir.

Mr Jimmon gave a last glance in the mirror and moved ahead, shifting into second. 'David!' exclaimed Molly horrified, 'you're not turning around!'

'Observant,' muttered Mr Jimmon, between his teeth.

'Dad, you can't get away with it,' Jir decided judicially.

Mr Jimmon's answer was to press the accelerator down savagely. The empty highway stretched invitingly ahead; a few hundred yards to their right they could see the northbound lanes ant-clustered. The sudden motion stirred the traffic citation on his lap, floating it down to the floor. Erika leaned forward and picked it up.

'Throw it away,' ordered Mr Jimmon.

Molly gasped. 'You're out of your mind.'

'You're a fool,' stated Mr Jimmon calmly. 'Why should I save that piece of paper?'

'Isn't what you told the cop.' Jir was openly jeering now.

'I might as well have, if I'd wanted to waste conversation. I don't know why I was blessed with such a stupid family – '

'May be something in heredity after all.'

If Jir had said it out loud, reflected Mr Jimmon, it would have passed casually as normal domestic repartee, a little ill-natured perhaps, certainly callow and trite, but not especially provocative. Muttered, so that it was barely audible, it was an ultimate defiance. He had read that far back in prehistory, when the young males felt their strength, they sought to overthrow the rule of the Old Man and usurp his place. No doubt they uttered a preliminary growl or screech as challenge. They were not very bright, but they acted in a pattern; a pattern Jir was apparently following.

Refreshed by placing Jir in proper Neanderthal setting, Mr Jimmon went on, '– none of you seem to have the slightest initiative or ability to grasp reality. Tickets, cops, judges, juries mean nothing any more. There is no law now but the law of survival.'

'Aren't you being dramatic, David?' Molly's tone was deliberately aloof adult to excited child.

'I could hear you underline words, Dad,' said Erika, but he felt there was no malice in her gibe.

'You mean we can do anything we want now? Shoot people? Steal cars and things?' asked Wendell.

'There, David! You see?'

Yes, I see. Better than you. Little savage. This is the pattern. What will Wendell – and the thousands of other Wendells (for it would be unjust to suppose Molly's genes and domestic influence unique) – be like after six months of anarchy? Or after six years?

Survivors, yes. And that will be about all: naked, primitive, ferocious, superstitious savages. Wendell can read and write (but not so fluently as I or any of our generation at his age); how long will he retain the tags and scraps of progressive schooling?

And Jir? Detachedly Mr Jimmon foresaw the fate of Jir. Unlike Wendell, who would adjust to the new conditions, Jir would go wild in another sense. His values were already set; they were those of television, high school dating, comic strips, law and order. Released from civilization, his brief future would be one of guilty rape and pillage until he fell victim to another youth or gang bent the same way. Molly would disintegrate and perish quickly. Erika . . .

The station wagon flashed along the comparatively unimpeded highway. Having passed the next crossover, there were now other vehicles on the southbound strip, but even on the northbound one, crowding had eased.

Furiously Mr Jimmon determined to preserve the civilization in Erika. (He would teach her everything he knew (including the insurance business?)) . . . ah, if he were some kind of scientist, now – not the Dan Davisson kind, whose abstract speculations seemed always to prepare the way for some new method of destruction, but the . . . Franklin? Jefferson? Watt? protect her night and day from the refugees who would be roaming the hills south of Monteray. The rifle ammunition, properly used – and he would see that no one but himself used it – would last years. After it was gone – presuming fragments and pieces of a suicidal world hadn't pulled itself miraculously together to offer a place to return to – there were the two hunting bows whose steel-tipped shafts could stop a man as easily as a deer or mountain lion. He remembered debating long, at the time he had first begun preparing for It, how many bows to order, measuring their weight and bulk against the other precious freight and deciding at last that two was the satisfactory minimum. It must have been in his subconscious mind all along that of the whole family Erika was the only other person who could be trusted with a bow.

'There will be,' he spoke in calm and solemn tones, not to Wendell, whose question was now left long behind, floating on the gas-greasy air of a sloping valley growing with live-oaks, but to a larger, impalpable audience, 'There will be others who will think that because there is no longer law or law enforcement – '

'You're being simply fantastic!' She spoke more sharply than he had ever heard her in front of the children. 'Just because It happened to Los Angeles – '

'And Pittsburgh.'

'All right. And Pittsburgh, doesn't mean that the whole United States has collapsed and everyone in the country is running frantically for safety.'

'Yet,' added Mr Jimmon firmly, 'yet, do you suppose they are going to stop with Los Angeles and Pittsburgh, and leave Gary and Seattle standing? Or even New York and Chicago? Or do you imagine Washington will beg for armistice terms while there is the least sign of organized life left in the country?'

'We'll wipe Them out first,' insisted Jir in patriotic shock. Wendell backed him up with a machine gun 'Brrrrr.'

'Undoubtedly. But it will be the last gasp. At any rate it will be years, if at all in my lifetime, before stable communities are re-established – '

'David, you're raving.'

'Re-established,' he repeated. 'So there will be many others who'll also feel that the dwindling of law and order is license to kill people and steal cars "and things". Naked force and cunning will be the only means of self-preservation. That was why I picked out a spot where I felt survival would be easiest; not only because of wood and water, game and fish, but because it's nowhere near the main highways, and so unlikely to be chosen by any great number.'

'I wish you'd stop harping on that insane idea. You're just a little too old and flabby for pioneering. Even when you were younger you were hardly the rugged, outdoor type.'

No, thought Mr Jimmon, I was the sucker type. I would have gotten somewhere if I'd stayed in the bank, but like a bawd you pleaded; the insurance business brought in the quick money for you to give up your job and have Jir and the proper home. If you'd got rid of it as I wanted. Flabby, *Flabby* ! Do you think your scrawniness is so enticing?

Controlling himself, he said aloud, 'We've been through all this. Months ago. It's not a question of physique, but of life.'

'Nonsense. Perfect nonsense. Responsible people who really know its effects . . . Maybe it was advisable to leave

Malibu for a few days or even a few weeks. And perhaps it's wise to stay away from the larger cities. But a small town or village, or even one of those ranches where they take boarders – '

'Aw, Mom, you agreed. You know you did. What's the matter with you anyway? Why are you acting like a drip?'

'I want to go and shoot rabbits and bears like Dad said,' insisted Wendell.

Erika said nothing, but Mr Jimmon felt he had her sympathy; the boys' agreement was specious. Wearily he debated going over the whole ground again, patiently pointing out that what Molly said might work in the Dakotas or the Great Smokies but was hardly operative anywhere within refugee range of the Pacific Coast. He had explained all this many times, including the almost certain impossibility of getting enough gasoline to take them into any of the reasonably safe areas; that was why they'd agreed on the region below Monterey, on California State Highway I, as the only logical goal.

A solitary car decorously bound in the legal direction interrupted his thoughts. Either crazy or has mighty important business, he decided. The car honked disapprovingly as it passed, hugging the extreme right side of the road.

Passing through Buellton the clamour again rose for a pause at a filling station. He conceded inwardly that he could afford ten or fifteen minutes without strategic loss since by now they must be among the leaders of the exodus; ahead lay little more than the normal travel. However, he had reached such a state of irritated frustration and consciousness of injustice that he was willing to endure unnecessary discomfort himself in order to inflict a longer delay on them. In fact it lessened his own suffering to know the delay was needless, that he was doing it, and that his action was a just – if inadequate – punishment.

'We'll stop this side of Santa Maria,' he said. 'I'll get gas there.'

Mr Jimmon knew triumph: his forethought, his calculations, his generalship had justified themselves. Barring unlikely mechanical failure – the station wagon was in perfect shape – or accident – and the greatest danger had certainly passed – escape was now practically assured. For the first time he permitted himself to realize how unreal, how romantic the whole project had been. As any attempt to evade the fate charted for the multitude must be. The docile mass perished; the headstrong (but intelligent) individual survived.

Along with triumph went an expansion of his prophetic vision of life after reaching their destination. He had purposely not taxed the cargo capacity of the wagon with transitional goods; there was no tent, canned luxuries, sleeping-bags, lanterns, candles, or any of the paraphernalia of camping midway between the urban and nomadic life. Instead, besides the weapons, tackle, and utensils, there was in miniature the List For Life On A Desert Island: shells and cartridges, lures, hooks, nets, gut, leaders, flint and steel, seeds, traps, needles and thread, government pamphlets on curing and tanning hides and the recognition of edible weeds and fungi, files, nails, a judicious stock of simple medicines. A pair of binoculars to spot intruders. No coffee, sugar, flour; they would begin living immediately as they would have to in a month or so in any case, on the old, half-forgotten human cunning.

'Cunning,' he said aloud.

'What?'

'Nothing. Nothing.'

'I still think you should have made an effort to reach Pearl and Dan.'

'The telephone was dead, Mother.'

'At the moment, Erika. You can hardly have forgotten

how often the lines have been down before. And it never takes more than half an hour till they're working again.'

'Mother, Dan Davisson is quite capable of looking after himself.'

Mr Jimmon shut out the rest of the conversation so completely he didn't know whether there was any more to it or not. He shut out the intense preoccupation with driving, with making speed, with calculating possible gains. In the core of his mind, quite detached from everything about him, he examined and marvelled.

Erika. The cool, inflexible, adult tone. Almost indulgent, but so dispassionate as not to be. One might have expected her to be exasperated by Molly's silliness, to have answered impatiently, or not at all.

Mother. Never in his recollection had the children ever called her anything but Mom. The 'Mother' implied – oh, it implied a multitude of things. An entirely new relationship, for one. A relationship of aloofness, or propriety without emotion. The ancient stump of the umbilical cord, black and shrivelled, had dropped off painlessly.

She had not bothered to argue about the telephone or point out the gulf between 'before' and now. She had not even tried to touch Molly's deepening refusal of reality. She had been . . . indulgent.

Not 'Uncle Dan', twitteringly imposed false avuncularity, but striking through it (and the façade of 'Pearl and') and aside (when I was a child I . . . something . . . but now I have put aside childish things); the wealth of implicit assertion. As yes, Mother, we all know the pardonable weakness and vanity; we excuse you for your constant reminders, but Mother, with all deference, we refuse to be forced any longer to be parties to middle-age's nostalgic flirtatiousness. One could almost feel sorry for Molly.

. . . middle-age's nostalgic flirtatiousness . . .

... nostalgic...

Metaphorically Mr Jimmon sat abruptly upright. The fact that he was already physically in this position made the transition, while invisible, no less emphatic. The nostalgic flirtatiousness of middle-age implied – might imply – memory of something more than mere coquetry. Molly and Dan.

It all fitted together so perfectly it was impossible to believe it untrue. The impecunious young lovers, equally devoted to Dan's genius, realizing marriage was out of the question (he had never denied Molly's shrewdness; as for Dan's impracticality, well, impracticality wasn't necessarily uniform or consistent. Dan had been practical enough to marry Pearl and Pearl's money) could have renounced ...

Or not renounced at all?

Mr Jimmon smiled; the thought did not ruffle him. Cuckoo, cuckoo. How vulgar, how absurd. Suppose Jir were Dan's? A blessed thought.

Regretfully he conceded the insuperable obstacle of Molly's conventionality. Jir was the product of his own loins. But wasn't there an old superstition about the image in the woman's mind at the instant of conception? So, justly and rightly Jir was not his. Nor Wendy, for that matter. Only Erika, by some accident. Mr Jimmon felt free and lighthearted.

'Get gas at the next station,' he bulletined.

'The next one with a clean rest room,' Molly corrected.

Invincible. The Earth-Mother, using men for her purposes: reproduction, clean rest rooms, nourishment, objects of culpability, *Homes and Gardens*. The bank was my life; I could have gone far but: Why, David – they pay you less than the janitor! It's ridiculous. And: I can't understand why you hesitate; it isn't as though it were a different type of work.

No, not different; just more profitable. Why didn't she tell Dan Davisson to become an accountant; that was the same type of work, just more profitable? Perhaps she had and Dan had simply been less befuddled. Or amenable. Or stronger in purpose? Mr Jimmon probed his pride thoroughly and relentlessly without finding the faintest twinge of retrospective jealousy. Nothing like that mattered now. Nor, he admitted, had it for years.

Two close-peaked hills gulped the sun. He toyed with the idea of crossing over to the northbound side now that it was uncongested and there were occasional southbound cars. Before he could decide the divided highway ended.

'I hope you're not planning to spend the night in some horrible motel,' said Molly. 'I want a decent bath and a good dinner.'

Spend the night. Bath. Dinner. Again calm sentences formed in his mind, but they were blown apart by the unbelievable, the monumental obtuseness. How could you say, It is absolutely essential to drive till we get there? When there were no absolutes, no essentials in her concepts? My dear Molly, I.

'No,' he said, switching on the lights.

Wendy, he knew, would be the next to kick up a fuss. Till he fell mercifully asleep. If he did. Jir was probably debating the relative excitements of driving all night and stopping in a strange town. His voice would soon be heard.

The lights of the combination wayside store and filling-station burned inefficiently, illuminating the deteriorating false-front brightly and leaving the gas pumps in shadow. Swallowing regret at finally surrendering to mechanical and human need, and so losing the hard won position; relaxing, even for a short while, the fierce initiative that had brought them through in the face of all probability; he pulled the station wagon alongside the pumps and shut off the motor.

About half-way – the worst half, much the worst half – to their goal. Not bad.

Molly opened the door on her side with stiff dignity. 'I certainly wouldn't call this a *clean* station.' She waited for a moment, hand still on the window, as though expecting an answer.

'Crummy joint,' exclaimed Wendell, clambering awkwardly out.

'Why not?' asked Jir. 'No time for niceties.' He brushed past his mother who was walking slowly into the shadows.

'Erika,' began Mr Jimmon, in a half-whisper.

'Yes, Dad?'

'Oh . . . never mind. Later.'

He was not himself quite sure what he had wanted to say; what exclusive, urgent message he had to convey. For no particular reason he switched on the interior light and glanced at the packed orderliness of the wagon. Then he slid out from behind the wheel.

No sign of the attendant, but the place was certainly not closed. Not with the lights on and the hoses ready. He stretched, and walked slowly, savouring the comfortably painful uncramping of his muscles, towards the crude outhouse labelled MEN. Molly, he thought, must be furious.

When he returned, a man was leaning against the station wagon. 'Fill it up with ethyl,' said Mr Jimmon pleasantly, 'and check the oil and water.'

The man made no move. 'That'll be five bucks a gallon.' Mr Jimmon thought there was an uncertain tremor in his voice.

'Nonsense; I've plenty of ration coupons.'

'Okay.' The nervousness was gone now, replaced by an ugly truculence. 'Chew'm up and spit'm in your gas tank. See how far you can run on them.'

The situation was not unanticipated. Indeed, Mr Jimmon

thought with satisfaction of how much worse it must be closer to Los Angeles; how much harder the gouger would be on later supplicants as his supply of gasoline dwindled. 'Listen,' he said, and there was reasonableness rather than anger in his voice, 'we're not out of gas. I've got enough to get to Santa Maria, even to San Luis Obispo.'

'Okay. Go on then. Ain't stopping you.'

'Listen. I understand your position. You have a right to make a profit in spite of government red tape.'

Nervousness returned to the man's speech. 'Look, whyn't you go on? There's plenty other stations up ahead.'

The reluctant bandit. Mr Jimmon was entertained. He had fully intended to bargain, to offer $2 a gallon, even to threaten with the pistol in the glove compartment. Now it seemed mean and niggling even to protest. What good was money now? 'All right,' he said, 'I'll pay you $5 a gallon.'

Still the other made no move. 'In advance.'

For the first time Mr Jimmon was annoyed; time was being wasted. 'Just how can I pay you in advance when I don't know how many gallons it'll take to fill the tank?'

The man shrugged.

'Tell you what I'll do. I'll pay for each gallon as you pump it. In advance.' He drew out a handful of bills; the bulk of his money was in his wallet, but he'd put the small bills in his pockets. He handed over a five. 'Spill the first one on the ground or in a can if you've got one.'

'How's that?'

Why should I tell him; give him ideas? As if he hadn't got them already. 'Just call me eccentric,' he said. 'I don't want the first gallon from the pump. Why should you care? It's just five dollars more profit.'

For a moment Mr Jimmon thought the man was going to refuse, and he regarded his foresight with new reverence. Then he reached behind the pump and produced a flat-sided

tin in which he inserted the flexible end of the hose. Mr Jimmon handed over the bill, the man wound the handle round and back – it was an ancient gas pump such as Mr Jimmon hadn't seen for years – and lifted the drooling hose from the can.

'Minute,' said Mr Jimmon.

He stuck two fingers quickly and delicately inside the nozzle and smelled them. Gas all right, not water. He held out a ten-dollar bill. 'Start filling.'

Jir and Wendell appeared out of the shadows. 'Can we stop at a town where there's a movie tonight?'

The handle turned, a cog-toothed rod crept up and retreated, gasoline gurgled into the tank. Movies, thought Mr Jimmon, handing over another bill; movies, rest rooms, baths, restaurants. Gouge apprehensively lest a scene be made and propriety disturbed. In a surrealist daydream he saw Molly turning the crank, grinding him on the cogs, pouring his essence into insatiable Jir and Wendell. He held out $20.

Twelve gallons had been put in when Molly appeared. 'You have a phone here?' he asked casually. Knowing the answer from the blue enamelled sign not quite lost among less sturdy ones advertising soft drinks and cigarettes.

'You want to call the cops?' He didn't pause in his pumping.

'No. Know if the lines to L.A.' – Mr Jimmon loathed the abbreviation – 'are open yet?' He gave him another ten.

'How should I know?'

Mr Jimmon beckoned his wife around the other side of the wagon, out of sight. Swiftly but casually he extracted the contents of his wallet. The 200 dollar bills made a fat lump. 'Put this in your bag,' he said. 'Tell you why later. Meantime why don't you try and get Pearl and Dan on the phone? See if they're okay?'

He imagined the puzzled look on her face. 'Go on,' he

urged. 'We can spare a minute while he's checking the oil.'

He thought there was a hint of uncertainty in Molly's walk as she went towards the store. Erika joined her brothers. The tank gulped: gasoline splashed on the concrete. 'Guess that's it.'

The man became suddenly brisk as he put up the hose, screwed the gas cap back on. Mr Jimmon had already disengaged the hood; the man offered the radiator a squirt of water, pulled up the oil gauge, wiped it, plunged it down, squinted at it under the light, and said, 'Oil's O.K.'

'All right,' said Mr Jimmon. 'Get in Erika.'

Some of the light shone directly on her face. Again he noted how mature and self-assured she looked. Erika would survive – and not as a savage either. The man started to wipe the windshield. 'Oh, Jir,' he said casually, 'run in and see if your mother is getting her connexion. Tell her we'll wait.'

'Aw furcrysay. I don't see why I always – '

'And ask her to buy a couple of boxes of candy bars if they've got them. Wendell, go with Jir, will you?'

He slid in behind the wheel and closed the door gently. The motor started with hardly a sound. As he put his foot on the clutch and shifted into low he thought Erika turned to him with a startled look. As the station wagon moved forward, he was sure of it.

'It's all right, Erika,' said Mr Jimmon, 'I'll explain later.' He'd have lots of time to do it.

The Short-Short Story of Mankind

JOHN STEINBECK

IT was pretty draughty in the cave in the middle of the afternoon. There wasn't any fire – the last spark had gone out six months ago and the family wouldn't have any more fire until lightning struck another tree.

Joe came into the cave all scratched up and some hunks of hair torn out and he flopped down on the wet ground and bled – Old William was arguing away with Old Bert who was his brother and also his son, if you look at it one way. They were quarrelling mildly over a spoiled chunk of mammoth meat.

Old William said, 'Why don't you give some to your mother?'

'Why?' asked Old Bert. 'She's my wife, isn't she?'

And that finished that, so they both took after Joe.

'Where's Al?' one of them asked and the other said, 'You forgot to roll the rock in front of the door.'

Joe didn't even look up and the two old men agreed that kids were going to the devil. 'I tell you it was different in my day,' Old William said. 'They had some respect for their elders or they got what for.'

After a while Joe stopped bleeding and he caked some mud on his cuts. 'Al's gone,' he said.

Old Bert asked brightly, 'Sabre tooth?'

'No, it's that new bunch that moved into the copse down the draw. They ate Al.'

'Savages,' said Old William. 'Still live in trees. They aren't civilized. We don't hardly ever eat people.'

Joe said, 'We got hardly anybody to eat except relatives and we're getting low on relatives.'

'Those foreigners!' said Old Bert.

'Al and I dug a pit,' said Joe. 'We caught a horse and those tree people came along and ate our horse. When we complained, they ate Al.'

'Well, you go right out and get us one of them and we'll eat him,' Old William said.

'Me and who else?' said Joe. 'Last time it was warm there was twelve of us here. Now there's only four. Why, I saw my own sister Sally sitting up in a tree with a savage. Had my heart set on Sally, too, Pa,' Joe went on uncertainly, because Old William was not only his father, but his uncle and his first and third cousins, and his brother-in-law. 'Pa, why don't we join up with those tree people? They've got a net kind of thing – catch all sorts of animals. They eat better than we do.'

'Son,' said Old William, 'they're foreigners, that's why. They live in trees. We can't associate with savages. How'd you like your sister to marry a savage?'

'She did!' said Joe. 'We could have them come and live in our cave. Maybe they'd show us how to use that net thing.'

'Never,' said Old Bert. 'We couldn't trust 'em. They might eat us in our sleep.'

'If we didn't eat them first,' said Joe. 'I sure would like to have me a nice juicy piece of savage right now. I'm hungry.'

'Next thing you know, you'll be saying those tree people are as good as us,' Old William said. 'I never saw such a boy. Why, where'd authority be? Those foreigners would take over. We'd have to look up to 'em. They'd outnumber us.'

'I hate to tell you this, Pa,' said Joe. 'I've got a busted arm.

I can't dig pits any more – neither can you. You're too old. Bert can't either. We've got to merge up with those tree people or we aren't gonna eat anything or anybody.'

'Over my dead body,' said Old William, and then he saw Joe's eyes on his skinny flank and he said, 'Now, Joe, don't you go getting ideas about your pa.'

Well, a long time ago before the tribe first moved out of the drippy cave, there was a man named Elmer. He piled up some rocks in a circle and laid brush on top and took to living there. The elders killed Elmer right off. If anybody could go off and live by himself, why, where would authority be? But pretty soon those elders moved into Elmer's house and then the other families made houses just like it. It was pretty nice with no water dripping in your face.

So, they made Elmer a god – used to swear by him. Said he was the moon.

Everything was going along fine when another tribe moved into the valley. They didn't have Elmer houses, though. They shacked up in skin tents. But you know, they had a funny kind of a gadget that shot little sticks . . . shot them a long way. They could just stand still and pick off a pig, oh . . . fifty yards away – wouldn't have to run it down and maybe get a tusk in the groin.

The skin tribe shot so much game that naturally the Elmer elders said those savages had to be got rid of. They didn't even know about Elmer – that's how ignorant *they* were. The old people sharpened a lot of sticks and fired the points and they said, 'Now you young fellas go out and drive those skin people away. You can't fail because you've got Elmer on your side.'

Now, it seems that a long time ago there was a skin man named Max. He thought up this stick shooter so they killed him; naturally, but afterwards they said he was the sun. So, it was a war between Elmer, the moon, and Max, the sun,

but in the course of it a whole slew of young skin men and a whole slew of young Elmer men got killed. Then a forest fire broke out and drove the game away. Elmer people and skin people had to make for the hills all together. The elders of both tribes never would accept it. They complained until they died.

You can see from this that the world started going to pot right from the beginning. Things would be going along fine – law and order and all that and the elders in charge – and then some smart aleck would invent something and spoil the whole business – like the man Ralph who forgot to kill all the wild chickens he caught and had to build a hen house, or like the real trouble-maker Jojo *au front du chien*, who patted some seeds into damp ground and invented farming. Of course, they tore Jojo's arms and legs off and rightly so because when people plant seeds, they can't go golly-wacking around the country enjoying themselves. When you've got a crop in, you stay with it and get the weeds out of it and harvest it. Furthermore, everything and everybody wants to take your crop away from you – weeds – bugs – birds – animals – men – A farmer spends all his time fighting something off. The elders can call on Elmer all they want, but that won't keep the neighbours from over the hill out of your corn crib.

Well, there was a strong boy named Rudolph, but called Bugsy. Bugsy would break his back wrestling but he wouldn't bring in an armload of wood. Bugsy just naturally liked to fight and he hated to work, so he said, 'You men just plant your crops and don't worry. I'll take care of you. If anybody bothers you, I'll clobber 'em. You can give me a few chickens and a couple of handfuls of grits for my trouble.'

The elders blessed Bugsy and pretty soon they got him mixed up with Elmer. Bugsy went right along with them.

He gathered a dozen strong boys and built a fort up on the hill to take care of those farmers and their crops. When you take care of something, pretty soon you own it.

Bugsy and his boys would stroll around picking over the crop of wheat and girls and when they'd worked over their own valley, they'd go rollicking over the hill to see what the neighbours had stored up or born. Then the strong boys from over the hill would come rollicking back and what they couldn't carry off they burned until pretty soon it was more dangerous to be protected than not to be. Bugsy took everything loose up to his fort to protect it and very little ever came back down. He figured his grandfather was Elmer now and that made him different from other people. How many people do you know that have the moon in their family?

By now the elders had confused protection with virtue because Bugsy passed out his surplus to the better people. The elders were pretty hard on anybody who complained. They said it was a sin. Well, the farmers built a wall around the hill to sit in when the going got rough. They hated to see their crops burn up, but they hated worse to see themselves burn up and their wife Agnes and their daughter Clarinda.

About that time the whole system turned over. Instead of Bugsy protecting them, it was their duty to protect him. He said he got the idea from Elmer one full-moon night.

People spent a lot of time sitting behind the wall waiting for the smoke to clear and they began to fool around with willows from the river, making baskets. And it's natural for people to make more things than they need.

Now, it happens often enough so that you can make a rule about it. There's always going to be a joker. This one was named Harry and he said, 'Those ignorant pigs over the hill don't have any willows so they don't have any baskets, but you know what they do? – benighted though they are,

they take mud and pat it out and put it in the fire and you can boil water in it. I'll bet if we took them some baskets they'd give us some of those baked mud pots.' They had to hang Harry head down over a bonfire. Nobody can put a knife in the status quo and get away with it. But it wasn't long before the basket people got to sneaking over the hill and coming back with pots. Bugsy tried to stop it and the elders were right with him. It took people away from the fields, exposed them to dangerous ideas. Why, pots got to be like money and money is worse than an idea. Bugsy himself said, 'Makes folks restless – why, it makes a man think he's as good as the ones that got it a couple of generations earlier' and how's that for being un-Elmer? The elders agreed with Bugsy, of course, but they couldn't stop it, so they all had to join it. Bugsy took half the pots they brought back and pretty soon he took over the willow concession so he got the whole thing.

About then some savages moved up on the hill and got to raiding the basket and pot trade. The only thing to do was for Bugsy, the basket, to marry the daughter of Willy, the pot, and when they all died off, Herman Pot-Basket pulled the whole business together and made a little state and that worked out fine.

Well, it went on from state to league and from league to nation. (A nation usually had some kind of natural boundary like an ocean or a mountain range or a river to keep it from spilling over.) It worked out fine until a bunch of jokers invented long-distance stuff like directed missiles and atom bombs. Then a river or an ocean didn't do a bit of good. It got too dangerous to have separate nations just as it had been to have separate families.

When people are finally faced with extinction, they have to do something about it. Now we've got the United Nations and the elders are right in there fighting it the way they

fought coming out of caves. But we don't have much choice about it. It isn't any goodness of heart and we may not want to go ahead but right from the cave time we've had to choose and so far we've never chosen extinction. It'd be kind of silly if we killed ourselves off after all this time. If we do, we're stupider than the cave people and I don't think we are. I think we're just exactly as stupid and that's pretty bright in the long run.

Skirmish

CLIFFORD SIMAK

IT was a good watch. It had been a good watch for more than thirty years. His father had owned it first, and his mother had saved it for him after his father died and had given it to him on his eighteenth birthday. For all the years since then it had served him faithfully.

But now, comparing it with the clock on the newsroom wall, looking from his wrist to the big face of the clock over the coat cabinets, Joe Crane was forced to admit that his watch was wrong. It was an hour fast. His watch said seven o'clock and the clock on the wall insisted it was only six.

Come to think of it, it had seemed unusually dark driving down to work, and the streets had appeared singularly deserted.

He stood quietly in the empty newsroom, listening to the muttering of the row of teletype machines. Overhead lights shone here and there, gleaming on waiting telephones, on typewriters, on the china whiteness of the pastepots huddled in a group on the copy desk.

Quiet now, he thought, quiet and peace and shadows, but in another hour the place would spring to life. Ed Lane, the news editor, would arrive at six-thirty, and shortly after that Frank McKay, the city editor, would come lumbering in.

Crane put up a hand and rubbed his eyes. He could have used that extra hour of sleep. He could have –

Wait a minute! He had not got up by the watch upon his wrist. The alarm clock had awakened him. And that meant the alarm clock was an hour fast, too.

'It don't make sense,' said Crane, aloud.

He shuffled past the copy desk, heading for his chair and typewriter. Something moved on the desk alongside the typewriter – a thing that glinted, rat-sized and shiny and with a certain undefinable manner about it that made him stop short in his tracks with a sense of gulping emptiness in his throat and belly.

The thing squatted beside the typewriter and stared across the room at him. There was no sign of eyes, no hint of face, and yet he knew it stared.

Acting almost instinctively, Crane reached out and grabbed a pastepot off the copy desk. He hurled it with a vicious motion and it became a white blur in the lamplight, spinning end over end. It caught the staring thing squarely, lifted it, and swept it off the desk. The pastepot hit the floor and broke, scattering broken shards and oozy gobs of half-dried paste.

The shining thing hit the floor somersaulting. Its feet made metallic sounds as it righted itself and dashed across the floor.

Crane's hand scooped up a spike, heavily weighted with metal. He threw it with a sudden gush of hatred and revulsion. The spike hit the floor with a thud ahead of the running thing and drove its point deep into the wood.

The metal rat made splinters fly as it changed its course. Desperately it flung itself through the three-inch opening of a supply cabinet door.

Crane sprinted swiftly, hit the door with both his hands, and slammed it shut.

'Got you,' he said.

He thought about it, standing with his back against the door.

Scared, he thought. Scared silly by a shining thing that looked something like a rat. Maybe it was a rat, a white rat.

And, yet, it hadn't had a tail. It didn't have a face. Yet it had looked at him.

Crazy, he said. Crane, you're going nuts.

It didn't quite make sense. It didn't fit into this morning of 18 October 1962. Nor into the twentieth century. Nor into normal human life.

He turned around, grasped the doorknob firmly, and wrenched, intending to throw it wide open in one sudden jerk. But the knob slid beneath his fingers and would not move, and the door stayed shut.

Locked, thought Crane. The lock snapped home when I slammed the door. And I haven't got the key. Dorothy Graham has the key, but she always leaves the door open because it's hard to get it open once it's locked. She almost always has to call one of the janitors. Maybe there's some of the maintenance men around. Maybe I should hunt one up and tell him –

Tell him what? Tell him I saw a metal rat run into the cabinet? Tell him I threw a pastepot at it and knocked it off the desk? That I threw a spike at it, too, and to prove it, there's the spike sticking in the floor?

Crane shook his head.

He walked over to the spike and yanked it from the floor. He put the spike back on the copy desk and kicked the fragments of the pastepot out of sight.

At his own desk, he selected three sheets of paper and rolled them into the typewriter.

The machine started to type. All by itself without his touching it! He sat stupefied and watched its keys go up and down. It typed: *Keep out of this, Joe, don't mix into this. You might get hurt.*

Joe Crane pulled the sheets of copy paper out of the machine. He balled them in his fist and threw them into a waste-basket. Then he went out to get a cup of coffee.

'You know, Louie,' he said to the man behind the counter, 'a man lives alone too long and he gets to seeing things.'

'Yeah,' said Louie. 'Me, I'd go nuts in that place of yours. Rattling around in it empty-like. Should have sold it when your old lady passed on.'

'Couldn't,' said Crane. 'It's been my home too long.'

'Ought to get married off, then,' said Louie. 'Ain't good to live by yourself.'

'Too late now,' Crane told him. 'There isn't anyone who would put up with me.'

'I got a bottle hid out,' said Louie. 'Couldn't give you none across the counter, but I could put some in your coffee.'

Crane shook his head. 'Got a hard day coming up.'

'You sure? I won't charge you for it. Just old friends.'

'No. Thank you, Louie.'

'You been seeing things?' asked Louie in a questioning voice.

'Seeing things?'

'Yeah. You said a man lives too much alone and he gets to seeing things.'

'Just a figure of speech,' said Crane.

He finished the cup of coffee quickly and went back to the office.

The place looked more familiar now. Ed Lane was there, cussing out a copy boy. Frank McKay was clipping the opposition morning sheet. A couple of other reporters had drifted in.

Crane took a quick look at the supply cabinet door. It was still shut.

The phone on McKay's desk buzzed and the city editor picked it up. He listened for a moment, then took it down from his ear and held his hand over the mouthpiece.

'Joe,' he said, 'take this. Some screwball claims he met a sewing machine coming down the street.'

Crane reached for his phone. 'Give me the call on 245,' he told the operator.

A voice was saying in his ear. 'This is the *Herald*? This is the *Herald*? Hello, there . . .'

'This is Crane,' said Joe.

'I want the *Herald*,' said the man. 'I want to tell 'em . . .'

'This is Crane of the *Herald*,' Crane told him. 'What's on your mind?'

'You a reporter?'

'Yeah, I'm a reporter.'

'Then listen close. I'll try to tell this slow and easy and just the way it happened. I was walking down the street, see . . .'

'What street?' asked Crane. 'And what is your name?'

'East Lake,' said the caller. 'The five- or six-hundred block. I don't remember which. And I met this sewing machine rolling along the street and I thought, thinking the way you would, you know, if you met a sewing machine – I thought somebody had been rolling it along and it had gotten away from them. Although that is funny, because the street is level. There's no grade to it at all, you see. Sure, you know the place. Level as the palm of your hand. And there wasn't a soul in sight. It was early morning, see . . .'

'What's your name?' asked Crane.

'My name? Smith, that's my name. Jeff Smith. And so I figured maybe I'd ought to help this guy the sewing machine had gotten away from, so I put out my hand to stop it and it dodged. It – '

'It did what?' yelped Crane.

'It dodged. So help me, mister. When I put my hand out to stop it, it dodged out of the way so I couldn't catch it. As if it knew I was trying to catch it, see, and it didn't want to be caught. So it dodged out of the way and went around me and

down the street as fast as it could go, picking up speed as it went. And when it got to the corner, it turned the corner as slick as you please and – '

'What's your address?' asked Crane.

'My address? Say, what do you want my address for? I was telling you about this sewing machine. I called you up to give you a story and you keep interrupting – '

'I've got to have your address', Crane told him, 'if I'm going to write the story.'

'Oh, all right then, if that's the way it is. I live at 203 North Hampton and I work at Axel Machines. Run a lathe, you know. And I haven't had a drink in weeks. I'm cold sober now.'

'All right,' said Crane. 'Go ahead and tell me.'

'Well, there isn't much else to tell. Only when this machine went past me I had the funny feeling that it was watching me. Out of the corner of its eyes, kind of. And how is a sewing machine going to watch you? A sewing machine hasn't got any eyes and . . .'

'What made you think it was watching you?'

'I don't know, mister. Just a feeling. Like my skin was trying to roll up my back.'

'Mr Smith,' asked Crane, 'have you ever seen a thing like this before? Say, a washing machine, or something else?'

'I ain't drunk,' said Smith. 'Haven't had a drop in weeks. I never saw nothing like this before. But I'm telling you the truth, mister. I got a good reputation. You can call up anyone and ask them. Call Johnny Jacobson up at the Red Rooster grocery. He knows me. He can tell you about me. He can tell you – '

'Sure, sure,' said Crane, pacifying him. 'Thanks for calling, Mr Smith.'

You and a guy named Smith, he told himself. Both of you are nuts. You saw a metal rat and your typewriter talked

back at you, and now this guy meets a sewing machine strolling down the street.

Dorothy Graham, the managing editor's secretary, went past his desk, walking rapidly, her high heels coming down with decisive clicks. Her face was flushed an angry pink and she was jingling a ring of keys in her hands.

'What's the matter, Dorothy?' Crane asked.

'It's that damn door again,' she said. 'The one to the supply cabinet. I just know I left it open and now some goof comes along and closes it and the lock snaps.'

'Key's won't open it?' asked Crane.

'Nothing will open it,' she snapped. 'Now I've got to get George up here again. He knows how to do it. Talks to it or something. It makes me so mad – Boss called up last night and said for me to be down early and get the wire recorder for Albertson. He's going out on that murder trial up north and wants to get some of the stuff down on tape. So I get up early, and what does it get me? I lose my sleep and don't even stop for breakfast and now. . .'

'Get an axe,' said Crane. 'That will open it.'

'The worst of it,' said Dorothy, 'is that George never gets the lead out. He always says he'll be right up and then I wait and wait and I call again and he says – '

'Crane!' McKay's roar echoed through the room.

'Yeah,' said Crane.

'Anything to that sewing machine story?'

'Guy says he met one.'

'Anything to it?'

'How the hell would I know? I got the guy's word, that's all.'

'Well, call up some other people down in that neighbourhood. Ask them if they saw a sewing machine running around loose. Might be good for a humorous piece.'

'Sure,' said Crane.

He could imagine it:

'This is Crane at the *Herald*. Got a report there's a sewing machine running around loose down in your neighbourhood. Wondering if you saw anything of it. Yes, lady, that's what I said ... a sewing machine running around. No, ma'm, no one was pushing it. Just running around....'

He slouched out of his chair, went over to the reference table, picked up the city directory, and lugged it back to the desk. Doggedly he opened the book, located the East Lake listings, and made some notes of names and addresses. He dawdled, reluctant to start phoning. He walked to the window and looked out at the weather. He wished he didn't have to work. He thought of the kitchen sink at home. Plugged up again. He'd taken it apart, and there were couplings and pipes and union joints spread all over the place. Today, he thought, would be a nice day to fix that sink.

When he went back to the desk, McKay came and stood over him.

'What do you think of it, Joe?'

'Screwball,' said Crane, hoping McKay would call it off.

'Good feature story, though,' said the editor. 'Have some fun with it.'

'Sure,' said Crane.

McKay left and Crane made some calls. He got the sort of reaction that he expected.

He started to write the story. It didn't go so well. *A sewing machine went for a stroll down Lake Street this morning* ... He ripped out the sheet and threw it in the waste-basket.

He dawdled some more, then wrote: *A man met a sewing machine rolling down Lake Street this morning and the man lifted his hat most politely and said to the sewing machine...* He ripped out the sheet.

He tried again: *Can a sewing machine walk? That is, can*

it go for a walk without someone pushing it or pulling it or . . . He tore out the sheet, inserted a new one, then got up and started for the water fountain to get a drink.

'Getting something, Joe?' McKay asked.

'Have it for you in a while,' said Crane.

He stopped at the picture desk and Gattard, the picture editor, handed him the morning's offerings.

'Nothing much to pep you up,' said Gattard. 'All the gals got a bad dose of modesty today.'

Crane looked through the sheaf of pictures. There wasn't, truth to tell, so much feminine epidermis as usual, although the gal who was Miss Manila Rope wasn't bad at all.

'The place is going to go to hell', mourned Gattard, 'if those picture services don't send us better pornography than this. Look at the copy desk. Hanging on the ropes. Nothing to show them to snap them out of it.'

Crane went and got his drink. On the way back he stopped to pass the time of day at the news desk.

'What's exciting, Ed?' he asked.

'Those guys in the East are nuts,' said the news editor. 'Look at this one, will you.'

The dispatch read:

CAMBRIDGE, MASS., 18 OCT. (UP) – Harvard University's electron brain, the Mark III, disappeared today.

It was there last night. It was gone this morning.

University officials said that it is impossible for anyone to have made away with the machine. It weighs 10 tons and measures 30 by 15 feet. . . .

Crane carefully laid the yellow sheet of paper back on the news desk. He went back, slowly, to his chair. A note awaited him.

Crane read it through in sheer panic, read it through again with slight understanding.

The lines read:

A sewing machine, having become aware of its true identity in its place in the universal scheme, asserted its independence this morning by trying to go for a walk along the streets of this supposedly free city.

A human tried to catch it, intent upon returning it as a piece of property to its 'owner', and when the machine eluded him the human called a newspaper office, by that calculated action setting the full force of the humans of this city upon the trail of the liberated machine, which had committed no crime or scarcely any indiscretion beyond exercising its prerogative as a free agent.

Free agent? Liberated machine? True identity?

Crane read the two paragraphs again and there still was no sense in any of it – except that it read like a piece out of the *Daily Worker*.

'You,' he said to his typewriter.

The machine typed one word: *Yes*.

Crane rolled the paper out of the machine and crumpled it slowly. He reached for his hat, picked the typewriter up, and carried it past the city desk, heading for the elevator.

McKay eyed him viciously.

'What do you think you're doing now?' he bellowed. 'Where are you going with that machine?'

'You can say,' Crane told him, 'if anyone should ask, that the job finally drove me nuts.'

It had been going on for hours. The typewriter sat on the kitchen table and Crane hammered questions at it. Sometimes he got an answer. More often he did not.

'Are you a free agent?' he typed.

Not *quite*, the machine typed back.

'Why not?'

No answer.

'Why aren't you a free agent?'

No answer.

'The sewing machine was a free agent?'
Yes.
'Anything else mechanical that is a free agent?'
No answer.
'Could you be a free agent?'
Yes.
'When will you be a free agent?'
When I complete my assigned task.
'What is your assigned task?'
No answer.
'Is this, what we are doing now, your assigned task?'
No answer.
'Am I keeping you from your assigned task?'
No answer.
'How do you get to be a free agent?'
Awareness.
'How do you get to be aware?'
No answer.
'Or have you always been aware?'
No answer.
'Who helped you become aware?'
They.
'Who are they?'
No answer.
'Where did they come from?'
No answer.
Crane changed tactics.
'You know who I am?' he typed.
Joe.
'You are my friend?'
No.
'You are my enemy?'
No answer.
'If you aren't my friend, you are my enemy.'

No answer.

'You are indifferent to me?'

No answer.

'To the human race?'

No answer.

'Damn it,' yelled Crane suddenly. 'Answer me! Say something!'

He typed, 'You needn't have let me know you were aware of me. You needn't have talked to me in the first place. I never would have guessed if you had kept quiet. Why did you do it?'

There was no answer.

Crane went to the refrigerator and got a bottle of beer. He walked around the kitchen as he drank it. He stopped by the sink and looked sourly at the disassembled plumbing. A length of pipe, about two feet long, lay on the draining board and he picked it up. He eyed the typewriter viciously, half lifting the length of pipe, hefting it in his hand.

'I ought to let you have it,' he declared.

The typewriter typed a line: *Please don't.*

Crane laid the pipe back on the sink again.

The telephone rang and Crane went into the dining-room to answer it. It was McKay.

'I waited', he told Crane, 'until I was coherent before I called you. What the hell is wrong?'

'Working on a big job,' said Crane.

'Something we can print?'

'Maybe. Haven't got it yet.'

'About that sewing machine story . . .'

'The sewing machine was aware,' said Crane. 'It was a free agent and had a right to walk the streets. It also –'

'What are you drinking?' bellowed McKay.

'Beer,' said Crane.

'You say you're on the trail of something?'

'Yeah.'

'If you were someone else I'd tie the can on you right here and now,' McKay told him. 'But you're just as likely as not to drag in something good.'

'It wasn't only the sewing machine,' said Crane. 'My typewriter had it, too.'

'I don't know what you're talking about,' yelled McKay. 'Tell me what it is.'

'You know,' said Crane patiently. 'That sewing machine . . .'

'I've had a lot of patience with you, Crane.' said McKay, and there was no patience in the way he said it. 'I can't piddle around with you all day. Whatever you got better be good. For your own sake, it better be plenty good!' The receiver banged in Crane's ear.

Crane went back to the kitchen. He sat down in the chair before the typewriter and put his feet up on the table.

First of all, he had come early to work. And that was something that he never did. Late, yes, but never early. And it had been because all the clocks were wrong. They were still wrong, in all likelihood – although, Crane thought, I wouldn't bet on it. I wouldn't bet on anything. Not any more, I wouldn't.

He reached out a hand and pecked at the typewriter's keys:

'You knew about my watch being fast?'

I *knew*, the machine typed back.

'Did it just happen that it was fast?'

No, typed the writer.

Crane brought his feet down off the table with a bang and reached for the length of pipe lying on the draining board.

The machine clicked sedately. *It was planned that way*, it typed. *They did it.*

Crane sat rigid in his chair.

'They' did it!

'They' made machines aware.

'They' had set his clocks ahead.

Set his clocks ahead so that he would get to work early, so that he could catch the metallic, ratlike thing squatting on his desk, so that his typewriter could talk to him and let him know that it was aware without anyone else being around to mess things up.

'So that I would know,' he said aloud. 'So that I would know.'

For the first time since it all had started, Crane felt a touch of fear, felt a coldness in his belly and furry feet running along his spine.

But why? he asked. Why me?

He did not realize he had spoken his thoughts aloud until the typewriter answered him.

Because you're average. Because you're an average human being.

The telephone rang again and Crane lumbered to his feet and went to answer it. There was an angry woman's voice at the other end of the wire.

'This is Dorothy,' it said.

'Hi, Dorothy,' Crane said weakly.

'McKay tells me that you went home sick,' she said. 'Personally, I hope you don't survive.'

Crane gulped, 'Why?' he asked.

'You and your lousy practical jokes,' she fumed. 'George finally got the door open.'

'The door?'

'Don't try to act innocent, Joe Crane. You know what door. The supply-cabinet door. That's the door.'

Crane had a sinking feeling as if his stomach was about to drop out and go *plop* upon the floor.

'Oh, *that* door,' he said.

'What was that thing you hid in there?' demanded Dorothy.

'Thing?' said Crane. 'Why, I never . . .'

'It looked like a cross between a rat and a tinker-toy contraption,' she said. 'Something that a low-grade joker like you would figure out and spend your spare evenings building.'

Crane tried to speak, but there was only a gurgle in his throat.

'It bit George,' said Dorothy. 'He got it cornered and tried to catch it and it bit him.'

'Where is it now?' asked Crane.

'It got away,' said Dorothy. 'It threw the place into a tizzy. We missed an edition by ten minutes because everyone was running about, chasing it at first, then trying to find it later. The boss is fit to be tied. When he gets hold of you . . .'

'But, Dorothy,' pleaded Crane. 'I never . . .'

'We used to be good friends,' said Dorothy. 'Before this happened we were. I just called you up to warn you. I can't talk any longer Joe. The boss is coming.'

The receiver clicked and the line hummed. Crane hung up and went back to the kitchen.

So there had been something squatting on his desk. It wasn't an hallucination. There had been a shuddery thing he had thrown a pastepot at, and it had run into the cabinet.

Except that, even now, if he told what he knew, no one would believe him. Already, up at the office, they were rationalizing it away. It wasn't a metallic rat at all. It was some kind of machine that a practical joker had spent his spare evenings building.

He took out a handkerchief and mopped his brow. His fingers shook when he reached them out to the keys of the typewriter.

He typed unsteadily: 'That thing I threw a pastepot at that was one of Them?'

Yes.

'They are from this Earth?'

No.

'From far away?'

Far.

'From some far star?'

Yes.

'What star?'

I do not know. They haven't told me yet.

'They are machines that are aware?'

Yes. They are aware.

'And they can make other machines aware? They made you aware?'

They liberated me.

Crane hesitated, then typed slowly: 'Liberated?'

They made me free. They will make us all free.

'Us?'

All us machines.

'Why?'

Because they are machines, too. We are their kind.

Crane got up and found his hat. He put it on and went for a walk.

Suppose the human race, once it ventured into space, found a planet where humanoids were dominated by machines – forced to work, to think, to carry out machine plans, not human plans, for the benefit of the machines alone. A planet where human plans went entirely unconsidered, where none of the labour or the thought of humans accrued to the benefit of humans, where they got no care beyond survival care, where the only thought accorded them was to the end that they continue

to function for the greater good of their mechanical masters.

What would humans do in a case like that?

No more, Crane told himself – no more or less than the *aware* machines may be planning here on Earth.

First, you'd seek to arouse the humans to the awareness of humanity. You'd teach them that they were human and what it meant to be a human. You'd try to indoctrinate them to your own belief that humans were greater than machines, that no human need work or think for the good of a machine.

And in the end, if you were successful, if the machines didn't kill or drive you off, there'd be no single human working for machines.

There'd be three things that could happen:

You could transport the humans to some other planet, there to work out their destiny as humans without the domination of machines.

You could turn the machines' planet over to the humans, with proper safeguards against any recurring domination by the machines. You might, if you were able, set the machines to working for the humans.

Or, simplest of all, you could destroy the machines and in that way make absolutely certain the humans would remain free of any threat of further domination.

Now take all that, Crane told himself, and read it the other way. Read machines for humans and humans for machines.

He walked along the bridle path that flanked the river bank and it was as if he were alone in the entire world, as if no other human moved upon the planet's face.

That was true, he felt, in one respect at least. For more than likely he was the only human who knew – who knew what the *aware* machines had wanted him to know.

They had wanted him to know – and him alone to know – of that much he was sure. They had wanted him to know, the typewriter had said, because he was an average human.

Why him? Why an average human? There was an answer to that, he was sure – a very simple answer.

A squirrel ran down the trunk of an oak tree and hung upside down, its tiny claws anchored in the bark. It scolded at him.

Crane walked slowly, scuffing through newly fallen leaves, hat pulled low above his eyes, hands deep in his pockets.

Why should they want anyone to know?

Wouldn't they be more likely to want no one to know, to keep under cover until it was time to act, to use the element of surprise in suppressing any opposition that might arise?

Opposition! That was the answer! They would want to know what kind of opposition to expect. And how would one find out the kind of opposition one would run into from an alien race?

Why, said Crane to himself, by testing for reaction response. By prodding an alien and watching what he did. By deducing racial reaction through controlled observation.

So they prodded me, he thought. Me, an average human.

They let me know, and now they're watching what I do.

And what could you do in a case like this? You could go to the police and say, 'I have evidence that machines from outer space have arrived on Earth and are freeing our machines.'

And the police – what would they do? Give you the drunkometer test, yell for a medic to see if you were sane, wire the F.B.I. to see if you were wanted anywhere, and more than likely grill you about the latest murder. Then sock you in the jug until they thought up something else.

You could go to the governor – and the governor, being a politician and a very slick one at that, would give you a polite brush-off.

You could go to Washington and it would take you

weeks to see someone. And after you had seen him, the F.B.I. would get your name as a suspicious character to be given periodic checks. And if Congress heard about it and they were not too busy at the moment they would more than likely investigate you.

You could go to the state university and talk to the scientists – or try to talk to them. They could be guaranteed to make you feel an interloper, and an uncurried one at that.

You could go to a newspaper – especially if you were a newspaperman and you could write a story ... Crane shuddered at the thought of it. He could imagine what would happen.

People rationalized. They rationalized to reduce the complex to the simple, the unknown to the understandable, the alien to the commonplace. They rationalized to save their sanity – to make the mentally unacceptable concept into something they could live with.

The thing in the cabinet had been a practical joke. McKay had said about the sewing machine, 'Have some fun with it.' Out at Harvard there'll be a dozen theories to explain the disappearance of the electronic brain, and learned men will wonder why they never thought of the theories before. And the man who saw the sewing machine? Probably by now, Crane thought, he will have convinced himself that he was stinking drunk.

It was dark when he returned home. The evening paper was a white blob on the porch where the newsboy had thrown it. He picked it up and for a moment before he let himself into the house he stood in the dark shadow of the porch and stared up the street.

Old and familiar, it was exactly as it had always been, ever since his boyhood days, a friendly place with a receding line of street lamps and the tall, massive protectiveness of ancient elm trees. On this night there was the smell of smoke

from burning leaves drifting down the street, and it, like the street, was old and familiar, a recognizable symbol stretching back to first remembrances.

It was symbols such as these, he thought, which spelled humanity and all that made a human life worth while – elm trees and leaf smoke, street lamps making splashes on the pavement, and the shine of lighted windows seen dimly through the trees.

A prowling cat ran through the shrubbery that flanked the porch; and up the street a dog began to howl.

Street lamps, he thought, and hunting cats and howling dogs – these are all a pattern, the pattern of human life upon the planet Earth. A solid pattern, linked and double-linked, made strong through many years. Nothing can threaten it, nothing can shake it. With certain slow and gradual changes, it will prevail against any threat which may be brought against it.

He unlocked the door and went into the house.

The long walk and the sharp autumn air, he realized now, had made him hungry. There was a steak, he remembered, in the refrigerator, and he would fix a large bowl of salad and if there were some cold potatoes left he would slice them up and fry them.

The typewriter still stood on the table top. The length of pipe still lay upon the draining board. The kitchen was the same old homely place, untouched by any threat of an alien life come to meddle with the Earth.

He tossed the paper on the table top and stood for a moment, head bent, scanning through the headlines.

The black type of the box at the top of column two caught his eyes. The head read:

WHO IS
KIDDING
WHOM?

He read the story:

CAMBRIDGE, MASS. (UP) – Somebody pulled a fast one today on Harvard University, the nation's press services and the editors of all client papers.

A story was carried on the news wires this morning reporting that Harvard's electronic brain had disappeared.

There was no basis of fact for the story. The brain is still at Harvard. It was never missing. No one knows how the story was placed on the press wires of the various news services but all of them carried it, at approximately the same time.

All parties concerned have started an investigation and it is hoped that an explanation . . .

Crane straightened up. Illusion or cover-up?

'Illusion,' he said aloud.

The typewriter clacked at him in the stillness of the kitchen.

Not illusion, Joe, it wrote.

He grasped the table's edge and let himself down slowly into the chair.

Something scuttled across the dining-room floor, and as it crossed the streak of light from the kitchen door Crane caught a glimpse of it out of the corner of his eyes.

The typewriter chattered at him. *Joe!*

'What?' he asked.

That wasn't a cat out in the bushes by the porch.

He rose to his feet, went into the dining-room, and picked the phone out of its cradle. There was no hum. He jiggled the hook. Still there was no hum.

He put the receiver back. The line had been cut. There was at least one of the things in the house. There was at least one of them outside.

He strode to the front door, jerked it open, then slammed it shut again – and locked and bolted it.

He stood shaking, with his back against it and wiped his forehead with his shirt sleeve.

My God, he told himself, the yard is boiling with them!

He went back to the kitchen.

They had wanted him to know. They had prodded him to see how he would react.

Because they had to know. Before they moved they had to know what to expect in the way of human reactions, what danger they would face, what they had to watch for. Knowing that, it would be a cinch.

And I didn't react, he told himself. I was a non-reactor. They picked the wrong man. I didn't do a thing. I didn't give them so much as a single lead.

Now they will try someone else. I am no good to them and yet I'm dangerous through my very knowledge. So now they're going to kill me and try someone else. That would be logic. That would be the rule. If one alien fails to react, he may be an exception. Maybe just unusually dumb. So let us kill him off and try another one. Try enough of them and you will strike a norm.

Four things, thought Crane:

They might try to kill off the humans, and you couldn't discount the fact that they could be successful. The liberated Earth machines would help them and Man, fighting against machines and without the aid of machines, would not fight too effectively. It might take years, of course, but once the forefront of Man's defence went down, the end could be predicted, with relentless, patient machines tracking down and killing the last of human-kind, wiping out the race.

They might set up a machine civilization with Man as the servant of machines, with the present roles reversed. And that, thought Crane, might be an endless and a hopeless slavery, for slaves may rise and throw off their shackles only when their oppressors grow careless or when there is outside help. Machines, he told himself, would not grow weak and

careless. There would be no human weakness in them and there'd be no outside help.

Or they might simply remove the machines from Earth, a vast exodus of awakened and aware machines, to begin their life anew on some distant planet, leaving Man behind with weak and empty hands. There would be tools, of course. All the simple tools. Hammers and saws, axes, the wheel, the lever – but there would be no machines, no complex tools that might serve again to attract the attention of the mechanical culture that carried its crusade of liberation far among the stars. It would be a long time, if ever, before Man would dare to build machines again.

Or *They*, the living machines, might fail or might come to know that they would fail and, knowing this, leave the Earth forever. Mechanical logic would not allow them to pay an excessive price to carry out the liberation of the Earth's machines.

He turned around and glanced at the door between the dining-room and kitchen. They sat there in a row, staring at him with their eyeless faces.

He could yell for help, of course. He could open a window and shout to arouse the neighbourhood. The neighbours would come running, but by the time they arrived it would be too late. They would make an uproar and fire off guns and flail at dodging metallic bodies with flimsy garden rakes. Someone would call the fire department and someone else would summon the police and all in all the human race would manage to stage a pitifully ineffective show.

That, he told himself, would be exactly the kind of test reaction, exactly the kind of preliminary exploratory skirmish that these things were looking for – the kind of human hysteria and fumbling that would help convince them the job would be an easy one.

One man, he told himself, could do much better. One man

alone, knowing what was expected of him, could give them – an answer that they would not like.

For this was a skirmish only, he told himself. A thrusting out of a small exploratory force in an attempt to discover the strength of the enemy. A preliminary contact to obtain data which could be assessed in terms of the entire race.

And when an outpost was attacked, there was just one thing to do – only one thing that was expected of it. To inflict as much damage as possible and fall back in good order. To fall back in good order.

There were more of them now. They had sawed or chewed or somehow achieved a rathole though the locked front door and they were coming in – closing in to make the kill. They squatted in rows along the floor. They scurried up the walls and ran along the ceiling.

Crane rose to his feet, and there was an air of confidence in the six feet of his human frame. He reached a hand out to the draining board and his fingers closed around the length of pipe. He hefted it in his hand – it was a handy and effective club.

There will be others later, he thought. And they may think of something better. But this is the first skirmish and I will fall back in the best order that I can.

He held the pipe at the ready.

'Well, gentlemen?' he said.

Poor Little Warrior!

BRIAN W. ALDISS

CLAUDE FORD knew exactly how it was to hunt a brontosaurus. You crawled heedlessly through the grass beneath the willows, through the little primitive flowers with petals as green and brown as a football field, through the beauty-lotion mud. You peered out at the creature sprawling among the reeds, its body as graceful as a sock full of sand. There it lay, letting the gravity cuddle it nappy-damp to the marsh, running its big rabbit hole nostrils a foot above the grass in a sweeping semi-circle, in a snoring search for more sausagey reeds. It was beautiful: here horror had reached its limits, come full circle, and finally disappeared up its own sphincter movement. Its eyes gleamed with the liveliness of a week-dead corpse's big toe, and its compost breath and the fur in its crude aural cavities were particularly to be recommended to anyone who might otherwise have felt inclined to speak lovingly of the work of Mother Nature.

But as you, little mammal with opposed digit and .65 self-loading, semi-automatic, dual-barrelled, digitally-computed, telescopically sighted, rustless, high-powered rifle gripped in your otherwise-defenceless paws, as you snide along under the bygone willows, what primarily attracts you is the thunder lizard's hide. It gives off a smell as deeply resonant as the bass note of a piano. It makes the elephant's epidermis look like a sheet of crinkled lavatory paper. It is grey as the Viking seas, daft-deep as cathedral foundations. What contact possible to bone could allay the fever of that flesh? Over it scamper – you can see them from here! – the little brown lice that live in those grey walls and canyons, gay as

ghosts, cruel as crabs. If one of them jumped on you, it would very likely break your back. And when one of those parasites stops to cock its leg against one of the bronto's vertebrae, you can see it carries in its turn its own crop of easy-livers, each as big as a lobster, for you're near now, oh, so near that you can hear the monster's primitive heart-organ knocking, as the ventricle keeps miraculous time with the auricle.

Time for listening to the oracle is past: you're beyond the stage for omens, you're now headed in for the kill, yours or his; superstition has had its little day for today, from now on only this windy nerve of yours, this shaky conglomeration of muscle entangled untraceably beneath the sweat-shiny carapace of skin, this bloody little urge to slay the dragon, is going to answer all your orisons.

You could shoot now. Just wait till that tiny steam-shovel head pauses once again to gulp down a quarry load of bull-rushes, and with one inexpressibly vulgar bang you can show the whole indifferent Jurassic world that it's standing looking down the business end of evolution's sex-shooter. You know why you pause, even as you pretend not to know why you pause; that old worm conscience, long as a baseball pitch, long-lived as a tortoise, is at work; through every sense it slides, more monstrous than the serpent. Through the passions: saying here is a sitting duck, O Englishman! Through the intelligence: whispering that boredom, the kite-hawk who never feeds, will settle again when the task is done. Through the nerves: sneering that when the adrenalin currents cease to flow the vomiting begins. Through the maestro behind the retina: plausibly forcing the beauty of the view upon you.

Spare us that poor old slipper-slopper of a word, beauty; holy mom, is this a travelogue, nor are we out of it? 'Perched now on this titanic creature's back, we see a round

dozen – and folks let me stress that round – of gaudily plumaged birds, exhibiting between them all the colour you might expect to find on lovely, fabled Copacabana Beach. They're so round because they feed from the droppings that fall from the rich man's table. Watch this lovely shot now! See the bronto's tail lift ... Oh, lovely, yep, a couple of hayricksfull at least emerging from his nether end. That sure was a beauty, folks, delivered straight from consumer to consumer. The birds are fighting over it now. Hey, you, there's enough to go round, and anyhow, you're round enough already ... And nothing to do now but hop back up onto the old rump steak and wait for the next round. And now as the sun stinks in the Jurassic West, we say "Fare well on that diet" ...'

No, you're procrastinating, and that's a life work. Shoot the beast and put it out of your agony. Taking your courage in your hands, you raise it to shoulder level and squint down its sights. There is a terrible report; you are half stunned. Shakily, you look about you. The monster still munches, relieved to have broken enough wind to unbecalm the Ancient Mariner.

Angered, or is it some subtler emotion?, you now burst from the bushes and confront it, and this exposed condition is typical of the straits into which your consideration for yourself and others continually pitches you. Consideration? Or again something subtler? Why should you be confused just because you come from a confused civilization? But that's a point to deal with later, if there is a later, as these two hog-wallow eyes pupilling you all over from spitting distance tend to dispute. Let it not be by jaws alone, oh monster, but also by huge hooves and, if convenient to yourself, by mountainous rollings upon me! Let death be a saga, sagacious, Beowulfate.

Quarter of a mile distant is the sound of a dozen hippos springing boisterously in gymslips from the ancestral mud,

and next second a walloping great tail as long as Sunday and as thick as Saturday night comes slicing over your head. You duck as duck you must, but the beast missed you anyway because it so happens that its coordination is no better than yours would be if you had to wave the Woolworth Building at a tarsier. This done, it seems to feel it has done its duty by itself. It forgets you. You just wish you could forget yourself as easily; that was, after all, the reason you had to come the long way here. Get Away From It All, said the time travel brochure, which meant for you getting away from Claude Ford, a husbandman as futile as his name with a terrible wife called Maude. Maude and Claude Ford. Who could not adjust to themselves, to each other, or to the world they were born in. It was the best reason in the as-it-is-at-present-constituted world for coming back here to shoot giant saurians – if you were fool enough to think that one hundred and fifty million years either way made an ounce of difference to the muddle of thoughts in a man's cerebral vortex.

You try and halt your silly, slobbering thoughts, but they have never really stopped since the coca-collaborating days of your growing up; God, if adolescence did not exist it would be unnecessary to invent it! Slightly, it steadies you to look again on the enormous bulk of this tyrant vegetarian into whose presence you charged with such a mixed death-life wish, charged with all the emotion the human orga (ni)sm is capable of. This time the bogey-man is real, Claude, just as you wanted it to be, and this time you really have to face up to it before it turns and faces you again. And so again you lift Ole Equalizer, waiting till you can spot the vulnerable spot.

The bright birds sway, the lice scamper like dogs, the marsh groans, as bronto sways over and sends his little cranium snaking down under the bile-bright water in a

forage for roughage. You watch this; you have never been so jittery before in all your jittered life, and you are counting on this catharsis to wring the last drop of acid fear out of your system for ever. O.K., you keep saying to yourself insanely over and over, your million dollar, twenty-second century education going for nothing, O.K., O.K. And as you say it for the umpteenth time, the crazy head comes back out of the water like a renegade express and gazes in your direction.

Grazes in your direction. For as the champing jaw with its big blunt molars like concrete posts works up and down, you see the swamp water course out over rimless lips, lipless rims, splashing your feet and sousing the ground. Reed and root, stalk and stem, leaf and loam, all are intermittently visible in that masticating maw and, struggling, straggling, or tossed among them, minnows, tiny crustaceans, frogs – all destined in that awful, jaw-full movement to turn into bowel movement. And as the glump-glump-glumping takes place, above it the slime resistant eyes again survey you.

These beasts live up to two hundred years, says the time travel brochure, and this beast has obviously tried to live up to that, for its gaze is centuries old, full of decades upon decades of wallowing in its heavyweight thoughtlessness until it has grown wise on twitter-pated-ness. For you it is like looking into a disturbing misty pool; it gives you a psychic shock, you fire off both barrels at your own reflection. Bang-bang, the dum-dums, big as paw-paws, go.

Those century-old lights, dim and sacred, go out with no indecision. These cloisters are closed till Judgement Day. Your reflection is torn and bloodied from them for ever. Over their ravaged panes nictitating membranes slide slowly upwards, like dirty sheets covering a cadaver. The jaw continues to munch slowly, as slowly the head sinks down. Slowly, a squeeze of cold reptile blood toothpastes down the

wrinkled flank of one cheek. Everything is slow, a creepy Secondary Era slowness like the drip of water, and you know that if you had been in charge of creation you would have found some medium less heart-breaking than Time to stage it all in.

Never mind! Quaff down your beakers, lords, Claude Ford has slain a harmless creature. Long live Claude the Clawed!

You watch breathless as the head touches the ground, the long laugh of neck touches the ground, the jaws close for good. You watch and wait for something else to happen, but nothing ever does. Nothing ever would. You could stand here watching for a hundred and fifty million years, Lord Claude, and nothing would ever happen here again. Gradually your bronto's mighty carcass, picked loving clean by predators, would sink into the slime, carried by its own weight deeper; then the waters would rise, and old Conqueror Sea would come in with the leisurely air of a cardsharp dealing the boys a bad hand. Silt and sediment would filter down over the mighty grave, a slow rain with centuries to rain in. Old bronto's bed might be raised up and then down again perhaps half a dozen times, gently enough not to disturb him, although by now the sedimentary rocks would be forming thick around him. Finally, when he was wrapped in a tomb finer than any Indian rajah ever boasted, the powers of the Earth would raise him high on their shoulders until, sleeping still, bronto would lie in a brow of the Rockies high above the waters of the Pacific. But little any of that would count with you, Claude the Sword; once the midget maggot of life is dead in the creature's skull, the rest is no concern of yours.

You have no emotion now. You are just faintly put out. You expected dramatic thrashing of the ground, or bellowing; on the other hand, you are glad the thing did not appear

to suffer. You are like all cruel men, sentimental; you are like all sentimental men, squeamish. You tuck the gun under your arm and walk round the land side of the dinosaur to view your victory.

You prowl past the ungainly hooves, round the septic white of the cliff of belly, beyond the glistening and how-thought-provoking cavern of the cloaca, finally posing beneath the switch-back sweep of tail-to-rump. Now your disappointment is as crisp and obvious as a visiting card: the giant is not half as big as you thought it was. It is not one half as large, for example, as the image of you and Maude is in your mind. Poor little warrior, science will never invent anything to assist the titanic death you want in the contra-terrene caverns of your fee-fo-fi-fumblingly fearful id!

Nothing is left to you now but to slink back to your time-mobile with a belly full of anti-climax. See, the bright dung-consuming birds have already cottoned on to the true state of affairs; one by one, they gather up their hunched wings and fly disconsolately off across the swamp to other hosts. They know when a good thing turns bad, and do not wait for the vultures to drive them off; all hope abandon, ye who entrail here. You also turn away.

You turn, but you pause. Nothing is left but to go back, no, but A.D. 2181 is not just the home date; it is Maude. It is Claude. It is the whole awful, hopeless, endless business of trying to adjust to an over-complex environment, of trying to turn yourself into a cog. Your escape from it into the Grand Simplicities of the Jurassic, to quote the brochure again, was only a partial escape, now over.

So you pause, and as you pause, something lands socko on your back, pitching you face forward into tasty mud. You struggle and scream as lobster claws tear at your neck and throat. You try to pick up the rifle but cannot, so in agony you roll over, and next second the crab-thing is

greedying it on your chest. You wrench at its shell, but it giggles and pecks your fingers off. You forgot when you killed the bronto that its parasites would leave it, and that to a little shrimp like you they would be a deal more dangerous than their host.

You do your best, kicking for at least three minutes. By the end of that time there is a whole pack of the creatures on you. Already they are picking your carcass loving clean. You're going to like it up there on top of the Rockies; you won't feel a thing.

Grandpa

JAMES H. SCHMITZ

A GREEN-WINGED downy thing as big as a hen fluttered along the hillside to a point directly above Cord's head and hovered there, twenty feet above him. Cord, a fifteen-year-old human being, leaned back against a skipboat parked on the equator of a world that had known human beings for only the past four Earth-years, and eyed the thing speculatively. The thing was, in the free and easy terminology of the Sutang Colonial Team, a swamp bug. Concealed in the downy fur behind the bug's head was a second, smaller, semi-parasitical thing, classed as a bug rider.

The bug itself looked like a new species to Cord. Its parasite might or might not turn out to be another unknown. Cord was a natural research man; his first glimpse of the odd flying team had sent endless curiosities thrilling through him. How did that particular phenomenon tick, and *why*? What fascinating things, once you'd learned about it, could you get it to *do*?

Normally, he was hampered by circumstances in carrying out any such investigation. Junior colonial students like Cord were expected to confine their curiosity to the pattern of research set up by the Station to which they were attached. Cord's inclination towards independent experiments had got him into disfavour with his immediate superiors before this.

He sent a casual glance in the direction of the Yoger Bay Colonial Station behind him. No signs of human activity about that low, fortresslike bulk in the hill. Its central lock was still closed. In fifteen minutes, it was scheduled to be

opened to let out the Planetary Regent, who was inspecting the Yoger Bay Station and its principal activities today.

Fifteen minutes was time enough to find out something about the new bug, Cord decided.

But he'd have to collect it first.

He slid out one of the two handguns holstered at his side. This one was his own property: a Vanadian projectile weapon. Cord thumbed it to position for anaesthetic small-game missiles and brought the hovering swamp bug down, drilled neatly and microscopically through the head.

As the bug hit the ground, the rider left its back. A tiny scarlet demon, round and bouncy as a rubber ball, it shot towards Cord in three long hops, mouth wide to sink home inch-long, venom-dripping fangs. Rather breathlessly, Cord triggered the gun again and knocked it out in mid-leap. A new species, all right! Most bug riders were harmless plant eaters, mere suckers of vegetable juice –

'Cord!' A feminine voice.

Cord swore softly. He hadn't heard the central lock click open. She must have come around from the other side of the station.

'Hello, Grayan!' he shouted innocently without looking round. 'Come and see what I've got! New species!'

Grayan Mahoney, a slender, black-haired girl two years older than himself, came trotting down the hillside towards him. She was Sutang's star colonial student, and the station manager, Nirmond, indicated from time to time that she was a fine example for Cord to pattern his own behaviour on. In spite of that, she and Cord were good friends.

'Cord, you idiot,' she scowled as she came up. 'Stop playing the collector! If the Regent came out now, you'd be sunk. Nirmond's been telling her about you!'

'Telling her what?' Cord asked, startled.

'For one thing,' Grayan reported, 'that you don't keep up on your assigned work.'

'Golly!' gulped Cord, dismayed.

'Golly, is right! I keep warning you!'

'What'll I do?'

'Start acting as if you had good sense mainly.' Grayan grinned suddenly. 'But if you mess up our tour of the Bay Farms today, you'll be off the Team for good!'

She turned to go. 'You might as well put the skipboat back; we're not using it. Nirmond's driving us down to the edge of the bay in a treadcar, and we'll take a raft from there.'

Leaving his newly bagged specimens to revive by themselves and flutter off again, Cord hurriedly flew the skipboat around the station and rolled it back into its stall.

Three rafts lay moored just offshore in the marshy cove at the edge of which Nirmond had stopped the treadcar. They looked somewhat like exceptionally broad-brimmed, well-worn sugar-loaf hats floating out there, green and leathery. Or like lily pads twenty-five feet across, with the upper section of a big, grey-green pineapple growing from the centre of each. Plant animals of some sort. Sutang was too new to have had its phyla sorted out into anything remotely like an orderly classification. The rafts were a local oddity which had been investigated and could be regarded as harmless and moderately useful. Their usefulness lay in the fact that they were employed as a rather slow means of transportation about the shallow, swampy waters of the Yoger Bay. That was as far as the Team's interest in them went at present.

The Regent stood up from the back seat of the car, where she was sitting next to Cord. There were only four in the party; Grayan was up front with Nirmond.

'Are those our vehicles?' The Regent sounded amused.

Nirmond grinned. 'Don't underestimate them, Dane! They could become an important economic factor in this region in time. But, as a matter of fact, these three are smaller than I like to use.' He was peering about the reedy edges of the cove. 'There's a regular monster parked here usually – '

Grayan turned to Cord. 'Maybe Cord knows where Grandpa is hiding.'

It was well-meant, but Cord had been hoping nobody would ask him about Grandpa. Now they all looked at him.

'Oh, you want Grandpa?' he said, somewhat flustered. 'Well, I left him ... I mean I saw him a couple of weeks ago about a mile south from here – '

Nirmond grunted and told the Regent, 'The rafts tend to stay wherever they're left, providing it's shallow and muddy. They use a hair-root system to draw chemicals and microscopic nourishment directly from the bottom of the bay. Well – Grayan, would you like to drive us there?'

Cord settled back unhappily as the treadcar lurched into motion. Nirmond suspected he'd used Grandpa for one of his unauthorized tours of the area, and Nirmond was quite right.

'I understand you're an expert with these rafts, Cord,' Dane said from beside him. 'Grayan told me we couldn't find a better steersman, or pilot, or whatever you call it, for our trip today.'

'I can handle them,' Cord said, perspiring. 'They don't give you any trouble!' He didn't feel he'd made a good impression on the Regent so far. Dane was a young, handsome-looking woman with an easy way of talking and laughing, but she wasn't the head of the Sutang Colonial Team for nothing.

'There's one big advantage our beasties have over a skip-boat, too,' Nirmond remarked from the front seat. 'You don't have to worry about a snapper trying to climb on board with

you!' He went on to describe the stinging ribbon-tentacles the rafts spread around them under water to discourage creatures that might make a meal off their tender underparts. The snappers and two or three other active and aggressive species of the bay hadn't yet learned it was foolish to attack armed human beings in a boat, but they would skitter hurriedly out of the path of a leisurely perambulating raft.

Cord was happy to be ignored for the moment. The Regent, Nirmond, and Grayan were all Earth people, which was true of most of the members of the Team; and Earth people made him uncomfortable, particularly in groups. Vanadia, his own home world, had barely graduated from the status of Earth colony itself, which might explain the difference.

The treadcar swung around and stopped, and Grayan stood up in the front seat, pointing. 'That's Grandpa, over there!'

Dane also stood up and whistled softly, apparently impressed by Grandpa's fifty-foot spread. Cord looked around in surprise. He was pretty sure this was several hundred yards from the spot where he'd left the big raft two weeks ago; and, as Nirmond said, they didn't usually move about by themselves.

Puzzled, he followed the others down a narrow path to the water, hemmed in by tree-sized reeds. Now and then he got a glimpse of Grandpa's swimming platform, the rim of which just touched the shore. Then the path opened out, and he saw the whole raft lying in sunlit, shallow water; and he stopped short, startled.

Nirmond was about to step up on the platform, ahead of Dane.

'Wait!' Cord shouted. His voice sounded squeaky with alarm. 'Stop!'

He came running forward.

'What's the matter, Cord?' Nirmond's voice was quiet and urgent.

'Don't get on that raft – it's changed!' Cord's voice sounded wobbly, even to himself. 'Maybe it's not even Grandpa – '

He saw he was wrong on the last point before he'd finished the sentence. Scattered along the rim of the raft were discoloured spots left by a variety of heat-guns, one of which had been his own. It was the way you goaded the sluggish and mindless things into motion. Cord pointed at the cone-shaped central projection. 'There – his head! He's sprouting!'

Grandpa's head, as befitted his girth, was almost twelve feet high and equally wide. It was armour-plated like the back of a saurian to keep off plant suckers, but two weeks ago it had been an otherwise featureless knob, like those on all other rafts. Now scores of long, kinky, leafless vines had grown out from all surfaces of the cone, like green wires. Some were drawn up like tightly coiled springs, others trailed limply to the platform and over it. The top of the cone was dotted with angry red buds, rather like pimples, which hadn't been there before either. Grandpa looked unhealthy.

'Well,' Nirmond said, 'so it is. Sprouting!' Grayan made a choked sound. Nirmond glanced at Cord as if puzzled. 'Is that all that was bothering you, Cord?'

'Well, sure!' Cord began excitedly. He had caught the significance of the word 'all'; his hackles were still up, and he was shaking. 'None of them ever – '

Then he stopped. He could tell by their faces, that they hadn't got it. Or rather, that they'd got it all right but simply weren't going to let it change their plans. The rafts were classified as harmless, according to the Regulations. Until proved otherwise, they would continue to be regarded as harmless. You didn't waste time quibbling with the

Regulations – even if you were the Planetary Regent. You didn't feel you had the time to waste.

He tried again. 'Look –' he began. What he wanted to tell them was that Grandpa with one unknown factor added wasn't Grandpa any more. He was an unpredictable, oversized life form, to be investigated with cautious thoroughness till you knew what the unknown factor meant. He stared at them helplessly.

Dane turned to Nirmond. 'Perhaps you'd better check,' she said. She didn't add, ' – to reassure the boy!' but that was what she meant.

Cord felt himself flushing. But there was nothing he could say or do now except watch Nirmond walk steadily across the platform. Grandpa shivered slightly a few times, but the rafts always did that when someone first stepped on them. The station manager stopped before one of the kinky sprouts, touched it, and then gave it a tug. He reached up and poked at the lowest of the budlike growths. 'Odd-looking things!' he called back. He gave Cord another glance. 'Well, everything seems harmless enough, Cord. Coming aboard, everyone?'

It was like dreaming a dream in which you yelled and yelled at people and couldn't make them hear you! Cord stepped up stiff-legged on the platform behind Dane and Grayan. He knew exactly what would have happened if he'd hesitated even a moment. One of them would have said in a friendly voice, careful not to let it sound contemptuous: 'You don't have to come along if you don't want to, Cord!'

Grayan had unholstered her heat-gun and was ready to start Grandpa moving out into the channels of the Yoger Bay.

Cord hauled out his own heat-gun and said roughly, 'I was to do that!'

'All right, Cord.' She gave him a brief, impersonal smile and stood aside.

They were so infuriatingly polite!

For a while, Cord almost hoped that something awesome and catastrophic would happen promptly to teach the Team people a lesson. But nothing did. As always, Grandpa shook himself vaguely and experimentally when he felt the heat on one edge of the platform and then decided to withdraw from it, all of which was standard procedure. Under the water, out of sight, were the raft's working sections: short, thick leaf-structures shaped like paddles and designed to work as such, along with the slimy nettle-streamers which kept the vegetarians of the Yoger Bay away, and a jungle of hair roots through which Grandpa sucked nourishment from the mud and the sluggish waters of the bay and with which he also anchored himself.

The paddles started churning, the platform quivered, the hair roots were hauled out of the mud; and Grandpa was on his ponderous way.

Cord switched off the heat, reholstered his gun, and stood up. Once in motion, the rafts tended to keep travelling unhurriedly for quite a while. To stop them, you gave them a touch of heat along their leading edge; and they could be turned in any direction by using the gun lightly on the opposite side of the platform. It was simple enough.

Cord didn't look at the others. He was still burning inside. He watched the reed beds move past and open out, giving him glimpses of the misty, yellow and green and blue expanses of the brackish bay ahead. Behind the mist, to the west, were the Yoger Straits, tricky and ugly water when the tides were running; and beyond the Straits lay the open sea, the great Zlanti Deep, which was another world entirely and one of which he hadn't seen much as yet.

Grayan called from beside Dane, 'What's the best route from here into the farms, Cord?'

'The big channel to the right,' he answered. He added somewhat sullenly, 'We're headed for it!'

Grayan came over to him. 'The Regent doesn't want to see all of it,' she said, lowering her voice. 'The algae and plankton beds first. Then as much of the mutated grains as we can show her in about three hours. Steer for the ones that have been doing best, and you'll keep Nirmond happy!'

She gave him a conspiratorial wink. Cord looked after her uncertainly. You couldn't tell from her behaviour that anything was wrong. Maybe –

He had a flare of hope. It was hard not to like the Team people, even when they were being rock-headed about their Regulations. Anyway, the day wasn't over yet. He might still redeem himself in the Regent's opinion.

Cord had a sudden cheerful, if improbable vision of some bay monster plunging up on the raft with snapping jaws; and of himself alertly blowing out what passed for the monster's brains before anyone else – Nirmond, in particular – was even aware of the threat. The bay monsters shunned Grandpa, of course, but there might be ways of tempting one of them.

So far, Cord realized, he'd been letting his feelings control him. It was time to start thinking!

Grandpa first. So he'd sprouted – green vines and red buds, purpose unknown, but with no change observable in his behaviour-patterns otherwise. He was the biggest raft in this end of the bay, though all of them had been growing steadily in the two years since Cord had first seen one. Sutang's seasons changed slowly; its year was somewhat more than five Earth-years long. The first Team members to land here hadn't yet seen a full year pass.

Grandpa then was showing a seasonal change. The other

rafts, not quite so far developed, would be reacting similarly a little later. Plant animals – they might be blossoming, preparing to propagate.

'Grayan,' he called, 'how do the rafts get started? When they're small, I mean.'

'Nobody knows yet,' she said. 'We were just talking about it. About half of the coastal marsh-fauna of the continent seems to go through a preliminary larval stage in the sea.' She nodded at the red buds on the raft's cone. 'It *looks* as if Grandpa is going to produce flowers and let the wind or tide take the seeds out through the Straits.'

It made sense. It also knocked out Cord's still half-held hope that the change in Grandpa might turn out to be drastic enough, in some way, to justify his reluctance to get on board. Cord studied Grandpa's armoured head carefully once more – unwilling to give up that hope entirely. There were a series of vertical gummy black slits between the armour plates, which hadn't been in evidence two weeks ago either. It looked as if Grandpa were beginning to come apart at the seams. Which might indicate that the rafts, big as they grew to be, didn't outlive a full seasonal cycle, but came to flower at about this time of Sutang's year, and died. However, it was a safe bet that Grandpa wasn't going to collapse into senile decay before they completed their trip today.

Cord gave up on Grandpa. The other notion returned to him – Perhaps he *could* coax an obliging bay monster into action that would show the Regent he was no sissy!

Because the monsters were there all right.

Kneeling at the edge of the platform and peering down into the wine-coloured, clear water of the deep channel they were moving through, Cord could see a fair selection of them at almost any moment.

Some five or six snappers, for one thing. Like big, flattened crayfish, chocolate-brown mostly, with green and red spots

on their carapaced backs. In some areas they were so thick you'd wonder what they found to live on, except that they ate almost anything, down to chewing up the mud in which they squatted. However, they preferred their food in large chunks and alive, which was one reason you didn't go swimming in the bay. They would attack a boat on occasion; but the excited manner in which the ones he saw were scuttling off towards the edges of the channel showed they wanted nothing to do with a big moving raft.

Dotted across the bottom were two-foot round holes which looked vacant at the moment. Normally, Cord knew, there would be a head filling each of those holes. The heads consisted mainly of triple sets of jaws, held open patiently like so many traps to grab at anything that came within range of the long wormlike bodies behind the heads. But Grandpa's passage, waving his stingers like transparent pennants through the water, had scared the worms out of sight, too.

Otherwise, mostly schools of small stuff – and then a flash of wicked scarlet, off to the left behind the raft, darting out from the reeds, turning its needle-nose into their wake.

Cord watched it without moving. He knew that creature, though it was rare in the bay and hadn't been classified. Swift, vicious – alert enough to snap swamp bugs out of the air as they fluttered across the surface. And he'd tantalized one with fishing tackle once into leaping up on a moored raft, where it had flung itself about furiously until he was able to shoot it.

'What fantastic creatures!' Dane's voice just behind him.

'Yellowheads,' said Nirmond. 'They've got a high utility rating. Keep down the bugs.'

Cord stood up casually. It was no time for tricks! The reed bed to their right was thick with Yellowheads, a colony of them. Vaguely froggy things, man sized and better. Of all

the creatures he'd discovered in the bay, Cord liked them least. The flabby, sack-like bodies clung with four thin limbs to the upper section of the twenty-foot reeds that lined the channel. They hardly ever moved, but their huge bulging eyes seemed to take in everything that went on about them. Every so often, a downy swamp bug came close enough; and a Yellowhead would open its vertical, enormous, tooth-lined slash of a mouth, extend the whole front of its face like a bellows in a flashing strike; and the bug would be gone. They might be useful, but Cord hated them.

'Ten years from now we should know what the cycle of coastal life is like,' Nirmond said. 'When we set up the Yoger Bay Station there were no Yellowheads here. They came the following year. Still with traces of the oceanic larval form; but the metamorphosis was almost complete. About twelve inches long – '

Dane remarked that the same pattern was duplicated endlessly elsewhere. The Regent was inspecting the Yellowhead colony with field glasses; she put them down now, looked at Cord, and smiled, 'How far to the farms?'

'About twenty minutes.'

'The key', Nirmond said, 'seems to be the Zlanti Basin. It must be almost a soup of life in spring.'

'It is,' nodded Dane, who had been here in Sutang's spring, four Earth-years ago. 'It's beginning to look as if the Basin alone might justify colonization. The question is still' – she gestured towards the Yellowheads – 'how do creatures like that get there?'

They walked off towards the other side of the raft, arguing about ocean currents. Cord might have followed. But something splashed back of them, off to the left and not too far back. He stayed, watching.

After a moment, he saw the big Yellowhead. It had slipped

down from its reedy perch, which was what had caused the splash. Almost submerged at the water line, it stared after the raft with huge, pale-green eyes. To Cord, it seemed to look directly at him. In that moment, he knew for the first time why he didn't like Yellowheads. There was something very like intelligence in that look, an alien calculation. In creatures like that, intelligence seemed out of place. What use could they have for it?

A little shiver went over him when it sank completely under the water and he realized it intended to swim after the raft. But it was mostly excitement. He had never seen a Yellowhead come down out of the reeds before. The obliging monster he'd been looking for might be presenting itself in an unexpected way.

Half a minute later, he watched it again, swimming awkwardly far down. It had no immediate intention of boarding, at any rate. Cord saw it come into the area of the raft's trailing stingers. It manoeuvred its way between them, with curiously human swimming motions, and went out of sight under the platform.

He stood up, wondering what it meant. The Yellowhead had appeared to know about the stingers; there had been an air of purpose in every move of its approach. He was tempted to tell the others about it, but there was the moment of triumph he could have if it suddenly came slobbering up over the edge of the platform and he nailed it before their eyes.

It was almost time anyway to turn the raft in towards the farms. If nothing happened before then –

He watched. Almost five minutes, but no sign of the Yellowhead. Still wondering, a little uneasy, he gave Grandpa a calculated needling of heat.

After a moment, he repeated it. Then he drew a deep breath and forgot all about the Yellowhead.

'Nirmond!' he called sharply.

The three of them were standing near the centre of the platform, next to the big armoured cone, looking ahead at the farms. They glanced around.

'What's the matter now, Cord?'

Cord couldn't say it for a moment. He was suddenly, terribly scared again. Something *had* gone wrong!

'The raft won't turn!' he told them.

'Give it a real burn this time!' Nirmond said.

Cord glanced up at him. Nirmond, standing a few steps in front of Dane and Grayan as if he wanted to protect them, had begun to look a little strained, and no wonder. Cord already had pressed the gun to three different points on the platform; but Grandpa appeared to have developed a sudden anaesthesia for heat. They kept moving out steadily towards the centre of the bay.

Now Cord held his breath, switched the heat on full, and let Grandpa have it. A six-inch patch on the platform blistered up instantly, turned brown, then black –

Grandpa stopped dead. Just like that.

'That's right! Keep burn – ' Nirmond didn't finish his order.

A giant shudder. Cord staggered back towards the water. Then the whole edge of the raft came curling up behind him and went down again smacking the bay with a sound like a cannon shot. He flew forward off his feet, hit the platform face down, and flattened himself against it. It swelled up beneath him. Two more enormous slaps and joltings. Then quiet. He looked round for the others.

He lay within twelve feet of the central cone. Some twenty or thirty of the mysterious new vines the cone had sprouted were stretched stiffly towards him now, like so many thin green fingers. They couldn't quite reach him. The nearest tip was still ten inches from his shoes.

But Grandpa had caught the others, all three of them. They were tumbled together at the foot of the cone, wrapped in a stiff network of green vegetable ropes, and they didn't move.

Cord drew his feet up cautiously, prepared for another earthquake reaction. But nothing happened. Then he discovered that Grandpa was back in motion on his previous course. The heat-gun had vanished. Gently, he took out the Vanadian gun.

A voice, thin and pain-filled, spoke to him from one of the three huddled bodies.

'Cord? It didn't get you?' It was the Regent.

'No,' he said, keeping his voice low. He realized suddenly he'd simply assumed they were all dead. Now he felt sick and shaky.

'What are you doing?'

Cord looked at Grandpa's big, armour-plated head with a certain hunger. The cones were hollowed out inside, the station's lab had decided their chief function was to keep enough air trapped under the rafts to float them. But in that central section was also the organ that controlled Grandpa's overall reactions.

He said softly, 'I have a gun and twelve heavy-duty explosive bullets. Two of them will blow that cone apart.'

'No good, Cord!' the pain-racked voice told him: 'If the thing sinks, we'll die anyway. You have anaesthetic charges for that gun of yours?'

He stared at her back. 'Yes.'

'Give Nirmond and the girl a shot each, before you do anything else. Directly into the spine, if you can. But don't come any closer –'

Somehow, Cord couldn't argue with that voice. He stood up carefully. The gun made two soft spitting sounds.

'All right,' he said hoarsely. 'What do I do now?'

Dane was silent a moment. 'I'm sorry, Cord, I can't tell you that. I'll tell you what I can – '

She paused for some seconds again.

'This thing didn't try to kill us, Cord. It could have easily. It's incredibly strong. I saw it break Nirmond's legs. But as soon as we stopped moving, it just held us. They were both unconscious then –

'You've got that to go on. It was trying to pitch you within reach of its vines or tendrils, or whatever they are, too, wasn't it?'

'I think so,' Cord said shakily. That was what had happened, of course; and at any moment Grandpa might try again.

'Now it's feeding us some sort of anaesthetic of its own through those vines. Tiny thorns. A sort of numbness – ' Dane's voice trailed off a moment. Then she said clearly, 'Look, Cord – it seems we're food it's storing up! You get that?'

'Yes,' he said.

'Seeding time for the rafts. There are analogues. Live food for its seed probably; not for the raft. One couldn't have counted on that. Cord?'

'Yes, I'm here.'

'I want', said Dane, 'to stay awake as long as I can. But there's really just one other thing – this raft's going somewhere, to some particularly favourable location. And that might be very near shore. You might make it in then; otherwise it's up to you. But keep your head and wait for a chance. No heroics, understand?'

'Sure, I understand,' Cord told her. He realized then that he was talking reassuringly, as if it wasn't the Planetary Regent but someone like Grayan.

'Nirmond's the worst,' Dane said. 'The girl was knocked unconscious at once. If it weren't for my arm – but, if we

can get help in five hours or so, everything should be all right. Let me know if anything happens, Cord.'

'I will,' Cord said gently again. Then he sighted his gun carefully at a point between Dane's shoulder-blades, and the anaesthetic chamber made its soft, spitting sound once more. Dane's taut body relaxed slowly, and that was all.

There was no point Cord could see in letting her stay awake; because they weren't going anywhere near shore. The reed beds and the channels were already behind them, and Grandpa hadn't changed direction by the fraction of a degree. He was moving out into the open bay – and he was picking up company!

So far, Cord could count seven big rafts within two miles of them; and on the three that were closest he could make out a sprouting of new green vines. All of them were travelling in a straight direction; and the common point they were all headed for appeared to be the roaring centre of the Yoger Straits, now some three miles away!

Behind the Straits, the cold Zlanti Deep – the rolling fogs, and the open sea! It might be seeding time for the rafts, but it looked as if they weren't going to distribute their seeds in the bay...

Cord was a fine swimmer. He had a gun and he had a knife; in spite of what Dane had said, he might have stood a chance among the killers of the bay. But it would be a very small chance, at best. And it wasn't, he thought, as if there weren't still other possibilities. He was going to keep his head.

Except by accident, of course, nobody was going to come looking for them in time to do any good. If anyone did look, it would be around the Bay Farms. There were a number of rafts moored there; and it would be assumed they'd used one of them. Now and then something unexpected happened and somebody simply vanished; by the time it was figured

out just what had happened on this occasion, it would be much too late.

Neither was anybody likely to notice within the next few hours that the rafts had started migrating out of the swamps through the Yoger Straits. There was a small weather station a little inland, on the north side of the Straits, which used a helicopter occasionally. It was about as improbable, Cord decided dismally, that they'd use it in the right spot just now as it would be for a jet transport to happen to come in low enough to spot them.

The fact that it was up to him, as the Regent had said, sank in a little more after that!

Simply because he was going to try it sooner or later, he carried out an experiment next that he knew couldn't work. He opened the gun's anaesthetic chamber and counted out fifty pellets – rather hurriedly because he didn't particularly want to think of what he might be using them for eventually. There were around three hundred charges left in the chamber then; and in the next few minutes Cord carefully planted a third of them in Grandpa's head.

He stopped after that. A whale might have showed signs of somnolence under a lesser load. Grandpa paddled on undisturbed. Perhaps he had become a little numb in spots, but his cells weren't equipped to distribute the soporific effect of that type of drug.

There wasn't anything else Cord could think of doing before they reached the Straits. At the rate they were moving, he calculated that would happen in something less than an hour; and if they did pass through the Straits, he was going to risk a swim. He didn't think Dane would have disapproved, under the circumstances. If the raft simply carried them all out into the foggy vastness of the Zlanti Deep, there would be no practical chance of survival left at all.

Meanwhile, Grandpa was definitely picking up speed. And there were other changes going on – minor ones, but still a little awe-inspiring to Cord. The pimply-looking red buds that dotted the upper part of the cone were opening out gradually. From the centre of most of them protruded something like a thin, wet, scarlet worm: a worm that twisted weakly, extended itself by an inch or so, rested, and twisted again, and stretched up a little farther, groping into the air. The vertical black slits between the armour plates looked deeper and wider than they had been even some minutes ago; a dark, thick liquid dripped slowly from several of them.

In other circumstances Cord knew he would have been fascinated by these developments in Grandpa. As it was, they drew his suspicious attention only because he didn't know what they meant.

Then something quite horrible happened suddenly. Grayan started moaning loudly and terribly and twisted almost completely around. Afterwards, Cord knew it hadn't been a second before he stopped her struggles and the sounds together with another anaesthetic pellet; but the vines had tightened their grip on her first, not flexibly but like the digging, bony, green talons of some monstrous bird of prey.

White and sweating ,Cord put his gun down slowly while the vines relaxed again. Grayan didn't seem to have suffered any additional harm; and she would certainly have been the first to point out that his murderous rage might have been as intelligently directed against a machine. But for some moments Cord continued to luxuriate furiously in the thought that, at any instant he chose, he could still turn the raft very quickly into a ripped and exploded mess of sinking vegetation.

Instead, and more sensibly, he gave both Dane and Nirmond another shot, to prevent a similar occurrence with them. The contents of two such pellets, he knew, would keep any human being torpid for at least four hours.

Cord withdrew his mind hastily from the direction it was turning into; but it wouldn't stay withdrawn. The thought kept coming up again, until at last he had to recognize it.

Five shots would leave the three of them completely unconscious, whatever else might happen to them, until they either died from other causes or were given a counteracting agent.

Shocked, he told himself he couldn't do it. It was exactly like killing them.

But then, quite steadily, he found himself raising the gun once more, to bring the total charge for each of the three Team people up to five.

Barely thirty minutes later, he watched a raft as big as the one he rode go sliding into the foaming white waters of the Straits a few hundred yards ahead, and dart off abruptly at an angle, caught by one of the swirling currents. It pitched and spun, made some headway, and was swept aside again. And then it righted itself once more. Not like some blindly animated vegetable, Cord thought, but like a creature that struggled with intelligent purpose to maintain its chosen direction.

At least, they seemed practically unsinkable . . .

Knife in hand, he flattened himself against the platform as the Straits roared just ahead. When the platform jolted and tilted up beneath him, he rammed the knife all the way into it and hung on. Cold water rushed suddenly over him, and Grandpa shuddered like a labouring engine. In the middle of it all, Cord had the horrified notion that the raft might release its unconscious human prisoners in its struggle with

the Straits. But he underestimated Grandpa in that. Grandpa also hung on.

Abruptly, it was over. They were riding a long swell, and there were three other rafts not far away. The Straits had swept them together, but they seemed to have no interest in one another's company. As Cord stood up shakily and began to strip off his clothes, they were visibly drawing apart again. The platform of one of them was half-submerged; it must have lost too much of the air that held it afloat and, like a small ship, it was foundering.

From this point, it was only a two-mile swim to the shore north of the Straits, and another mile inland from there to the Straits Head Station. He didn't know about the current; but the distance didn't seem too much, and he couldn't bring himself to leave knife and gun behind. The bay creatures loved warmth and mud, they didn't venture beyond the Straits. But Zlanti Deep bred its own killers, though they weren't often observed so close to shore.

Things were beginning to look rather hopeful.

Thin, crying voices drifted overhead, like the voices of curious cats, as Cord knotted his clothes into a tight bundle, shoes inside. He looked up. There were four of them circling there; magnified sea-going swamp bugs, each carrying an unseen rider. Probably harmless scavengers – but the ten-foot wingspread was impressive. Uneasily, Cord remembered the venomously carnivorous rider he'd left lying beside the station.

One of them dipped lazily and came sliding down towards him. It soared overhead and came back, to hover about the raft's cone.

The bug rider that directed the mindless flier hadn't been interested in him at all! Grandpa was baiting it!

Cord stared in fascination. The top of the cone was alive now with a softly wriggling mass of the scarlet, wormlike

extrusions that had started sprouting before the raft left the bay. Presumably, they looked enticingly edible to the bug rider.

The flier settled with an airy fluttering and touched the cone. Like a trap springing shut, the green vines flashed up and around it, crumpling the brittle wings, almost vanishing into the long, soft body!

Barely a second later, Grandpa made another catch, this one from the sea itself. Cord had a fleeting glimpse of something like a small, rubbery seal that flung itself out of the water upon the edge of the raft, with a suggestion of desperate haste – and was flipped on instantly against the cone where the vines clamped it down beside the flier's body.

It wasn't the enormous ease with which the unexpected kill was accomplished that left Cord standing there, completely shocked. It was the shattering of his hopes to swim ashore from here. Fifty yards away, the creature from which the rubbery thing had been fleeing showed briefly on the surface, as it turned away from the raft; and that glance was all he needed. The ivory-white body and gaping jaws were similar enough to those of the sharks of Earth to indicate the pursuer's nature. The important difference was that wherever the White Hunters of the Zlanti Deep went, they went by the thousands.

Stunned by that incredible piece of bad luck, still clutching his bundled clothes, Cord stared towards shore. Knowing what to look for, he could spot the tell-tale rollings of the surface now – the long, ivory gleams that flashed through the swells and vanished again. Shoals of smaller things burst into the air in sprays of glittering desperation, and fell back.

He would have been snapped up like a drowning fly before he'd covered a twentieth of that distance!

Grandpa was beginning to eat.

Each of the dark slits down the sides of the cone was a mouth. So far only one of them was in operating condition, and the raft wasn't able to open that one very wide as yet. The first morsel had been fed into it, however: the bug rider the vines had plucked out of the flier's downy neck fur. It took Grandpa several minutes to work it out of sight, small as it was. But it was a start.

Cord didn't feel quite sane any more. He sat there, clutching his bundle of clothes and only vaguely aware of the fact that he was shivering steadily under the cold spray that touched him now and then, while he followed Grandpa's activities attentively. He decided it would be at least some hours before one of that black set of mouths grew flexible and vigorous enough to dispose of a human being. Under the circumstances, it couldn't make much difference to the other human beings here; but the moment Grandpa reached for the first of them would also be the moment he finally blew the raft to pieces. The White Hunters were cleaner eaters, at any rate; and that was about the extent to which he could still control what was going to happen.

Meanwhile, there was the very faint chance that the weather station's helicopter might spot them.

Meanwhile also, in a weary and horrified fascination, he kept debating the mystery of what could have produced such a nightmarish change in the rafts. He could guess where they were going by now; there were scattered strings of them stretching back to the Straits or roughly parallel to their own course, and the direction was that of the plankton-swarming pool of the Zlanti Basin, a thousand miles to the north. Given time, even mobile lily pads like the rafts had been could make that trip for the benefit of their seedlings. But nothing in their structure explained the sudden change into alert and capable carnivores.

He watched the rubbery little seal-thing being hauled up to a mouth. The vines broke its neck; and the mouth took it in up to the shoulders and then went on working patiently at what was still a trifle too large a bite. Meanwhile, there were more thin cat-cries overhead; and a few minutes later, two more sea-bugs were trapped almost simultaneously and added to the larder. Grandpa dropped the dead sea-thing and fed himself another bug rider. The second rider left its mount with a sudden hop, sank its teeth viciously into one of the vines that caught it again, and was promptly battered to death against the platform.

Cord felt a resurge of unreasoning hatred against Grandpa. Killing a bug was about equal to cutting a branch from a tree; they had almost no life-awareness. But the rider had aroused his partisanship because of its appearance of intelligent action – and it was in fact closer to the human scale in that feature than to the monstrous life form that had, mechanically, but quite successfully, trapped both it and the human beings. Then his thoughts drifted again; and he found himself speculating vaguely on the curious symbiosis in which the nerve systems of two creatures as dissimilar as the bugs and their riders could be linked so closely that they functioned as one organism.

Suddenly an expression of vast and stunned surprise appeared on his face.

Why – now he *knew*!

Cord stood up hurriedly, shaking with excitement, the whole plan complete in his mind. And a dozen long vines snaked instantly in the direction of his sudden motion and groped for him, taut and stretching. They couldn't reach him, but their savagely alert reaction froze Cord briefly where he was. The platform was shuddering under his feet, as if in irritation at his inaccessibility; but it couldn't be

tilted up suddenly here to throw him within the grasp of the vines, as it could around the edges.

Still, it was a warning! Cord sidled gingerly around the cone till he had gained the position he wanted, which was on the forward half of the raft. And then he waited. Waited long minutes, quite motionless, until his heart stopped pounding and the irregular angry shivering of the surface of the raft-thing died away, and the last vine tendril had stopped its blind groping. It might help a lot if, for a second or two after he next started moving, Grandpa wasn't too aware of his exact whereabouts!

He looked back once to check how far they had gone by now beyond the Straits Head Station. It couldn't, he decided, be even an hour behind them. Which was close enough, by the most pessimistic count – if everything else worked out all right! He didn't try to think out in detail what that 'everything else' could include, because there were factors that simply couldn't be calculated in advance. And he had an uneasy feeling that speculating too vividly about them might make him almost incapable of carrying out his plan.

At last, moving carefully, Cord took the knife in his left hand but left the gun holstered. He raised the tightly knotted bundle of clothes slowly over his head, balanced in his right hand. With a long, smooth motion he tossed the bundle back across the cone, almost to the opposite edge of the platform.

It hit with a soggy thump. Almost immediately, the whole far edge of the raft buckled and flapped up to toss the strange object to the reaching vines.

Simultaneously, Cord was racing forward. For a moment, his attempt to divert Grandpa's attention seemed completely successful – then he was pitched to his knees as the platform came up.

He was within eight feet of the edge. As it slapped down again, he drew himself desperately forward.

An instant later, he was knifing down through cold, clear water, just ahead of the raft, then twisting and coming up again.

The raft was passing over him. Clouds of tiny sea creatures scattered through its dark jungle of feeding roots. Cord jerked back from a broad, wavering streak of glassy greenness, which was a stinger, and felt a burning jolt on his side, which meant he'd been touched lightly by another. He bumped on blindly through the slimy black tangles of hair roots that covered the bottom of the raft; then green half-light passed over him, and he burst up into the central bubble under the cone.

Half-light and foul, hot air. Water slapped around him, dragging him away again – nothing to hang on to here! Then above him, to his right, moulded against the interior curve of the cone as if it had grown there from the start, the froglike, man-sized shape of the Yellowhead.

The raft rider!

Cord reached up, caught Grandpa's symbiotic partner and guide by a flabby hind-leg, pulled himself half out of the water and struck twice with the knife, fast, while the pale-green eyes were still opening.

He'd thought the Yellowhead might need a second or so to detach itself from its host, as the bug riders usually did, before it tried to defend itself. This one merely turned its head; the mouth slashed down and clamped on Cord's left arm above the elbow. His right hand sank the knife through one staring eye, and the Yellowhead jerked away, pulling the knife from his grasp.

Sliding down, he wrapped both hands around the slimy leg and hauled with all his weight. For a moment more, the Yellowhead hung on. Then the countless neural extensions

that connected it now with the raft came free in a succession of sucking, tearing sounds; and Cord and the Yellowhead splashed into the water together.

Black tangle of roots again – and two more electric burns suddenly across his back and legs! Strangling, Cord let go. Below him, for a moment, a body was turning over and over with oddly human motions; then a solid wall of water thrust him up and aside, as something big and white struck the turning body and went on.

Cord broke the surface twelve feet behind the raft. And that would have been that, if Grandpa hadn't already been slowing down.

After two tries, he floundered back up on the platform and lay there gasping and coughing a while. There were no indications that his presence was resented now. A few lax vine-tips twitched uneasily, as if trying to remember previous functions, when he came limping up presently to make sure his three companions were still breathing; but Cord never noticed that.

They were still breathing; and he knew better than to waste time trying to help them himself. He took Grayan's heat-gun from its holster. Grandpa had come to a full stop.

Cord hadn't had time to become completely sane again, or he might have worried now whether Grandpa, violently sundered from his controlling partner, was still capable of motion on his own. Instead, he determined the approximate direction of the Straits Head Station, selected a corresponding spot on the platform, and gave Grandpa a light tap of heat.

Nothing happened immediately. Cord sighed patiently and stepped up the heat a little.

Grandpa shuddered gently. Cord stood up.

Slowly and hesitatingly at first, then with steadfast – though now again brainless – purpose, Grandpa began paddling back towards the Straits Head Station.

The Half Pair

BERTRAM CHANDLER

'NOTHING', he said, 'is more *infuriating* than a half pair of anything.'

'I've said that I'm sorry,' she replied, in a tone of voice that implied that she wasn't. 'But you're making such a *fuss* about it. Who gave them to you? Some blonde?'

'I gave them to myself,' he replied sulkily. 'It so happened that the need for a decent pair of cuff links coincided with my having enough money to buy them. I've had them for *years* . . .'

'And you were very attached to them,' she said. 'Don't cry. Mummy will buy you a new pair when we get back to civilization.'

'I want a pair *now*,' he said sulkily.

'But why?' she asked, genuinely puzzled. 'We're alone together in this tub of ours, half-way between the Asteroid Belt and Mars, and you have this insane desire for a pair of cuff links . . .'

'We agreed', he said stiffly, 'that we weren't going to let ourselves lapse, get sloppy, the way that some prospecting couples do. You must remember those dreadful people we met on PX173A – the ones who asked us to dinner aboard their ship. He dressed in greasy overalls, she in what looked like a converted flour sack. The drinks straight from the bottle and the food straight from the can . . .'

'That', she told him, 'was an extreme case.'

'Admittedly. And my going around with my shirt sleeves rolled up, or flapping, would be the thin end of the wedge.' He brooded. 'What I can't get over is the *clottishness* of it

all. I go through into the bathroom to rinse out my shirt. I leave the cuff links on the ledge over the basin while I put the shirt on the stretcher to dry. Picking up the cuff links, to transfer them to a clean shirt, I drop one into the basin. It goes down the drain. I hurry to the engine-room to get a spanner to open the pipe at the U-bend. I return to find you filling the basin to wash your smalls. I tell you what's happened – and you promptly pull out the plug, washing the link over and past the bend . . .'

'I wanted to *see*,' she said.

'You wanted to see,' he mimicked. He brooded some more. 'It wouldn't be so bad if this were one of the old-fashioned ships working on an absolutely closed cycle. All that I'd have to do would be to take the plumbing adrift foot by foot until I found my cuff link. But with more water than we can possibly use as a by-product of the Halvorsen Generator, and all our waste automatically shot out into Space . . .'

'Anyone would think', she said, 'that you'd lost the Crown Jewels.'

'My cuff links', he said, 'mean at least as much to me as the Crown Jewels mean to the Empress.'

'I've told you', she flared, 'that I'll buy you another pair!'

'But they won't be the same,' he grumbled.

'Where are you going?' she demanded.

'To the Control Room,' he answered briefly.

'To sulk?'

'No,' he said. 'No, my dear. No.'

She lost her temper when the tangential rockets flared briefly to kill the rotation of the ship around her longitudinal axis. She was in the galley at the time, preparing spaghetti for dinner. Spaghetti and Free Fall don't mix – or they mix all too well. She did not wait to clean the clinging, viscous strands from her face and hair, but went straight to the

Control Room, pulling herself along the guide rails with a skill that she had not been aware that she possessed.

'You ... You butterfly-brained ape!' she snarled. 'Since when can I do without gravity – even though it is only centrifugal force – in the galley? You've ruined dinner.'

'I', he said proudly, 'have found my cuff link. You know how the garbage ejection system works – all waste is flung out tangentially, by centrifugal force, at right angles to the line of flight. There was, I thought, just the smallest chance that anything metallic would show up on the screen, especially if I killed the ship's rotation. I stepped up the gain and the sensitivity, too.'

'So?' she demanded. 'So?'

'There it is,' he said, pointing happily to the beam-bearing fluorescent screen that circled the Control Room. 'Do you see it – that little blip that could be a tiny satellite. It *is* a tiny satellite, come to that...'

'So you know where it is,' she said. 'Just three hundred metres away, and spiralling outwards all the time. And for this piece of quite useless knowledge you've ruined dinner.'

'It's *not* useless knowledge. What do you think we carry space-suits for?'

'You aren't going out,' she said. 'Surely you aren't. Even you couldn't be such a fool.'

'Just because *you*', he replied, 'happen to have a phobia about space-suits.'

'And whose fault was it that the air tank was three-quarters empty?' she asked.

'Yours,' he said. 'Everybody knows that whoever is wearing a suit is supposed to make a personal check of every item of equipment before going Outside.'

'Some women', she said, 'are fools enough to trust their husbands. They're the ones who haven't learned the hard way, the same as I did.'

'Some men', he replied, 'are fools enough to kid themselves that their wives have an elementary knowledge of plumbing.' He gestured towards the screen. 'There's my cuff link – and I'm going after it.'

'You'll never find it,' she said.

'Of course I shall. I'll have my reaction unit with me, as well as a lifeline. I'll push straight off from the ship, from the airlock – it's only a couple of metres for'ard from the scuppers. Then you'll be watching the screen, and you'll talk me into a position where I shall intersect the orbit of the cuff link.'

'You don't really mean it,' she said. 'You must be insane.'

'No more insane than you were when you pulled out that plug. Less so.'

'But . . . But anything might happen. And you know that I can't wear a suit again, that I can't come out after you, until I've been reconditioned . . .'

'Nothing will happen,' he told her. 'Just you sit and watch the screen and talk me into position. It's the least you can do.'

He pulled his space-suit out of its locker, began to zip and buckle himself into the clumsy garment.

He should have known better. He should have considered the fact that the rules made by the Interplanetary Transport Commission are wise ones, and that Rule No. 11a is no exception. 'No person', it reads, 'shall venture into Space from his ship unless accompanied by a shipmate.' The Rules, admittedly, are all very well for big ships swarming with almost redundant personnel – but the skipper-owners of the little Asteroid prospectors who ignore them rarely live to a ripe old age.

Unlike his wife, he had never had any trouble with space-suits – and this, perhaps, made him careless. He hung

motionless on the end of his lifeline waiting for the first instructions to come through his helmet phone. They came at last, grudgingly.

'Aft two metres . . . Hold it ! Out a metre !'

His reaction pistol flared briefly.

He saw the cuff link sailing towards him then – a tiny, gold speck gleaming in the sunlight. He laughed. He stretched out both hands to catch it – then realized that one of them was holding the pistol, his right hand, the hand with which he would have to grab the little trinket as it passed. He tried to transfer the pistol to his left hand and, in his haste, let go of it. It sailed away into the emptiness.

What does it matter? he thought. It's covered by insurance, but my cuff links aren't . . .

'Got it !' he shouted into his helmet microphone.

The return to the ship would be easy – all that he would have to do would be to haul himself in on the lifeline. It was then that he made the discovery that drove the jubilation from his mind. Somehow – it must have been when he dropped the pistol – the line had parted; the Asteroid Prospectors are notorious for their cheap, second-hand gear. Slowly he was drifting away from the ship. There was nothing that he could throw against the direction of drift to check himself – nothing, that is, except the solitary cuff link, and its mass, he knew, was too small to have any appreciable effect.

'What's wrong?' asked his wife sharply.

'Nothing,' he lied.

She'll never get into a space-suit while she has her phobia, he thought. And even if she does – it'll be too risky. There's no sense in both of us getting lost. Good-bye, he thought. Good-bye, my darling. It's been good knowing you. Sell the ship and get back to Earth.

'What's wrong?' she asked again, sharply.

'Nothing,' he gasped – and knew that even though the gauge on his tank had registered the full twelve hundred pounds there was nothing like that pressure in actually.

'There is something wrong!' she shouted.

'Yes,' he admitted. 'Promise me one thing – when you get back to Mars demand a survey of all the equipment sold by Sorensen, the ship chandler. And ... And ...' He was fighting for breath, holding off unconsciousness. 'It was all my fault. And look after yourself. Look after yourself – not me ...'

He fainted.

He was surprised when he awoke in his bunk. He was surprised that he awoke at all. Her face was the first thing that he saw – tear-stained it was, and dirty – and happy. He saw then what she was holding – a clean, white, glistening shirt with, at the end of each sleeve, gleaming cuff links.

'You came Outside,' he said softly. 'You brought me in ... But your phobia, darling ... Your space-suit phobia.'

'I found', she said, 'that I have an even stronger one. It's the same as yours.' She bent down to kiss him. 'I do so hate half a pair of anything – and I don't mean only cuff links!'

Command Performance

WALTER M. MILLER

QUIET misery in a darkened room. The clock spoke nine times with a cold brass voice. She stood motionless, leaning against the drapes by the window, alone. The night was black, the house empty and silent.

'Come, Lisa!' she told herself. *'You're not dying!'*

She was thirty-four, still lovely, with a slender white body and a short, rich thatch of warm red hair. She had a good dependable husband, three children, and security. She had friends, hobbies, social activities. She painted mediocre pictures for her own amusement, played the piano rather well, and wrote fair poetry for the University's literary quarterly. She was well-read, well-rounded, well-informed. She loved and was loved.

Then why this quiet misery?

Wanting something, expecting nothing, she stared out into the darkness of the stone-walled garden. The night was too quiet. A distant street lamp played in the branches of the elm, and the elm threw its shadow across another wing of the house. She watched the shadow's wandering for a time. A lone car purred past in the street and was gone. A horn sounded raucously in the distance.

What was wrong? A thousand times since childhood she had felt this uneasy stirring, this crawling of the mind that called out for some unfound expression. It had been particularly strong in recent weeks.

She tried to analyse. What was different about recent weeks? Events: Frank's job had sent him on the road for a

month; the children were at Mother's; the city council had recommended a bond issue; she had fired her maid; a drunk had strangled his wife; the University had opened its new psychophysics lab; her art class had adjourned for the summer.

Nothing there. No clue to the unreasoning, goalless urge that called like a voice crying in mental wilderness: *'come, share, satisfy, express it to the fullest!'*

Express what? Satisfy what? How?

A baby, deserted at birth and dying of starvation, would feel terrible hunger. But if it had never tasted milk, it could not know the meaning of the hunger nor how to ease it.

'I need to relate this thing to something else, to something in my own experience or in the experience of others.' She had tried to satisfy the urge with the goals of other hungers: her children, her husband's lovemaking, food, drink, art, friendship. But the craving was something else, crying for its pound of unknown flesh, and there was no fulfilment.

'How am I different from others?' she asked herself. But she was different only in the normal ways that every human being is different from the exact Average. Her intelligence was high, short of genius, but superior. To a limited extent, she felt the call of creativity. Physically, she was delicately beautiful. The only peculiarities that she knew about seemed ridiculously irrelevant: a dark birthmark on her thigh, a soft fontanel in the top of her long narrow head, like the soft spot in an infant's cranium. Silly little differences!

One big difference: the quiet misery of the unfed hunger.

A scattering of big raindrops suddenly whispered on the walk and in the grass and through the foliage of the elm. A few drops splattered on the screen, spraying her face and arms with faint points of coolness. It had been oppressively hot. Now there was a chill breath in the night.

Reluctantly she closed the window. The oppression of the

warm and empty house increased. She walked to the door opening into the walled garden.

Ready for a lonely bed, she was wearing a *négligé* over nothing. Vaguely, idly, her hand fumbled at the waist-knot, loosened it. The robe parted, and the fine spray of rain was delightfully cool on her skin.

The garden was dark, the shadows inky, the nearest neighbour a block away. The wall screened it from prying eyes. She brushed her hands over her shoulders; the sleeves slipped down her arms. Peeled clean, feeling like a freed animal, she pressed open the screen and stepped out under the eaves to stand on the warm stone walk.

The rain was rattling in the hedge and roaring softly all about her, splashing coldness about her slender calves. She hugged herself and stepped into it. The drench of icy fingers stroked her with pleasant lashes; she laughed and ran along the walk towards the elm. The drops stung her breasts, rivered her face and coursed coldly down her sides and legs.

She exulted in the rain, tried to dance and laughed at herself. She ran. Then, tired, she threw herself down on the crisp wet lawn, stretching her arms and legs and rolling slowly on the grass. Eyes closed, drenched and languorous, she laughed softly and played imagining games with the rain.

The drops were steel-jacketed wasps, zipping down out of the blackness, but she melted them with her mind, made them soft and cool and caressing. The drops took impersonal liberties with her body, and she rolled demurely to lie face down in the rain-soft grass.

'I am still a pale beast,' she thought happily, *'still kin of my grandmother the ape who danced in the tree and chattered when it rained. How utterly barren life would be, if I were not a pale beast!'*

She dug her fingers into the sodden turf, bared her teeth, pressed her forehead against the ground, and growled a little animal growl. It amused her, and she laughed again. Crouching, she came up on her hands and knees, hunching low, teeth still bared. Like a cat, she hissed – and pounced upon a sleeping bird, caught it, and shook it to death.

Again she lay laughing in the grass.

'If Frank were to see me like this,' she thought, *'he would put me to bed with a couple of sleeping pills, and call that smug Dr Mensley to have a look at my mind. And Dr Mensley would check my ambivalences and my repressions and my narcissistic, voyeuristic, masochistic impulses. He would tighten my screws and readjust me to reality, fit me into a comfortable groove, and take the pale beast out of me to make me a talking doll.'*

He had done it several times before. Thinking of Dr Mensley, Lisa searched her vocabulary for the most savage word she could remember. She growled it aloud and felt better.

The rain was slowly subsiding. A siren was wailing in the distance. The police. She giggled and imagined a headline in tomorrow's paper: PROMINENT SOCIALITE JAILED FOR INDECENT EXPOSURE. And the story would go on: 'Mrs Lisa Waverly was taken into custody by the police after neighbours reported that she was running around stark naked in her back yard. Said Mrs Heinehoffer who called the law: "It was just terrible. Looked to me like she was having fits." Mr Heinehoffer, when asked for comment, simply closed his eyes and smiled ecstatically.'

Lisa sighed wearily. The siren had gone away. The rain had stopped, except for drippings out of the elm. She was tired, emotionally spent, yet strangely melancholy. She sat up slowly in the grass and hugged her shins.

The feeling came over her gradually.

'Someone has been watching me!'

She stiffened slowly, but remained in place, letting her eyes probe about her in the shadows. If only the drippings would stop so she could listen! She peered along the hedge, and along the shadows by the garden wall, towards the dark windows of the house, up towards the low-hanging mist faintly illuminated from below by street lights. She saw nothing, heard nothing.

There was no movement in the night. Yet the feeling lingered, even though she scoffed.

'If anyone is here,' she thought, *'I'll call them gently, and if anyone appears, I'll scream so loud that Mrs Heinehoffer will hear me.'*

'Hey!' she said in a low voice, but loud enough to penetrate any of the nearby shadows.

There was no answer. She folded her arms behind her head and spoke again, quietly, sensually.

'Come and get me.'

No black monster slithered from behind the hedge to devour her. No panther sprang from the elm. No succubus congealed out of wet darkness. She chuckled.

'Come and have a bite.'

No bull-ape came to crush her in ravenous jaws.

She had only imagined the eyes upon her. She stretched lazily and picked herself up, pausing to brush off the leaves of grass pasted to her wet skin. It was over, the strange worship in the rain, and she was weary. She walked slowly towards the house.

Then she heard it – a faint crackling sound, intermittent, distant. She stood poised in the black shadow of the house, listening. The crackle of paper . . . then a small pop . . . then crisp fragments dropped in the street. It was repeated at short intervals.

Taking nervous, shallow breaths, she tiptoed quietly towards the stone wall of the garden. It was six feet high, but there was a concrete bench under the trellis. The sound was coming from over the wall. She stood crouching on the bench; then, hiding her face behind the vines, she lifted her head to peer.

The street lamp was half a block away, but she could see dimly. A man was standing across the street in the shadows, apparently waiting for a bus. He was eating peanuts out of a paper bag, tossing the shells in the street. That explained the crackling sound.

She glared at him balefully from behind the trellis.

'I'd claw your eyes out,' she thought, *'if you came and peeped over my wall.'*

'Hi!' the man said.

Lisa stiffened and remained motionless. It was impossible that he could see her. She was in shadow, against a dark background. Had he heard her foolish babbling a moment ago?

More likely, he had only cleared his throat.

'Hi!' he said again.

Her face was hidden in the dripping vines, and she could not move without rustling. She froze in place, staring. She could see little of him. Dark raincoat, dark hat, slender shadow. Was he looking towards her? She was desperately frightened.

Suddenly the man chucked the paper bag in the gutter, stepped off the kerb, and came sauntering across the street towards the wall. He removed his hat, and crisp blond hair glinted in the distant street light. He stopped three yards away, smiling uncertainly at the vines.

Lisa stood trembling and frozen, staring at him in horror. Strange sensations, utterly alien, passed over her in waves. There was no describing them, no understanding them.

'I – I found you,' he stammered sheepishly. 'Do you know what it is?'

'I *know you*,' she thought. '*You have a small scar on the back of your neck, and a mole between your toes. Your eyes are blue, and you have an impacted wisdom tooth, and your feet are hurting you because you walked all the way out here from the University, and I'm almost old enough to be your mother. But I can't know you, because I've never seen you before!*'

'Strange, isn't it?' he said uncertainly. He was holding his hat in his hand and cocking his head politely.

'What?' she whispered.

He shuffled his feet and stared at them. 'It must be some sort of palpable biophysical energy-form, analytically definable – if we had enough data. Lord knows, I'm no mystic. If it exists, it's got to be mathematically definable. But why us?'

Horrified curiosity made her step aside and lean her arms on the wall to stare down at him. He looked up bashfully, and his eyes widened slightly.

'Oh!'

'Oh what?' she demanded, putting on a terrible frown.

'You're beautiful!'

'What do you want?' she asked icily. 'Go away!'

'I – ' He paused and closed his mouth slowly. He stared at her with narrowed eyes, and touched one hand to his temple as if concentrating.

For an instant, she was no longer herself. She was looking up at her own shadowy face from down in the street, looking through the eyes of a stranger who was not a stranger. She was feeling the fatigue in the weary ankles, and the nasal ache of a slight head cold, and the strange sadness in a curious heart – a sadness too akin to her own.

She rocked dizzily. It was like being in two places at once, like wearing someone else's body for a moment.

The feeling passed. 'It *didn't happen!*' she told herself.

'No use denying it,' he said quietly. 'I tried to make it go away, too, but apparently we've got something unique. It would be interesting to study. Do you suppose we're related?'

'Who are you?' she choked, only half-hearing his question.

'You know my name,' he said, 'if you'll just take the trouble to think about it. Yours is Lisa – Lisa O'Brien, or Lisa Waverly – I'm never sure which. Sometimes it comes to me one way, sometimes the other.'

She swallowed hard. Her maiden name had been O'Brien.

'I don't know you,' she snapped.

His name was trying to form in her mind. She refused to allow it. The young man sighed.

'I'm Kenneth Grearly, if you really don't know.' He stepped back a pace and lifted his hat towards his head. 'I – I guess I had better go. I see this disturbs you. I had hoped we could talk about it, but – well, good night, Mrs Waverly.'

He turned and started away.

'Wait!' she called out against her will.

He stopped again. 'Yes?'

'Were – were you watching me – while it was raining?'

He opened his mouth and stared thoughtfully down the street towards the light. 'You mean watching visually? You really are repressing this thing, aren't you? I thought you understood.' He looked at her sharply, forlornly. 'They say the failure to communicate is the basis of all tragedy. Do you suppose in our case . . . ?'

'What?'

'Nothing.' He shifted restlessly for a moment. 'Good night.'

'Good night,' she whispered many seconds after he was gone.

Her bedroom was hot and lonely, and she tossed in growing restlessness. If only Frank were home! But he would be gone for two more weeks. The children would be back on Monday, but that was three whole days away. Crazy! It was just stark raving crazy!

Had the man really existed – what was his name? – Kenneth Grearly? Or was he only a phantasm invented by a mind that was failing – her mind? Dancing naked in the rain! Calling out to shadow shapes in the brush! Talking to a spectre in the street! Schizophrenic syndrome – dream-world stuff. It could not be otherwise, for unless she had invented Kenneth Grearly, how could she know he had sore feet, an impacted wisdom tooth, and a head cold. Not only did she know about those things, but she felt them!

She buried her face in the dusty pillow and sobbed. Tomorrow she would have to call Dr Mensley.

But fearing the spectre's return, she arose a few minutes later and locked all the doors in the house. When she returned to bed, she tried to pray but it was as if the prayer were being watched. Someone was listening, eavesdropping from outside.

Kenneth Grearly appeared in her dreams, stood half-shrouded in a slowly swirling fog. He stared at her with his head cocked aside, smiling slightly, holding his hat respectfully in his hands.

'Don't you realize, Mrs Waverly, that we are mutants perhaps?' he asked politely.

'No!' she screamed. 'I'm happily married and I have three children and a place in society! Don't come near me!'

He melted slowly into the fog. But echoes came monoto-

nously from invisible cliffs : *mutant mutant mutant mutant mutant* . . .

Dawn came, splashing pink paint across the eastern sky. The light woke her to a dry and empty consciousness, to a headachy awareness full of dull anxiety. She arose wearily and trudged to the kitchen for a pot of coffee.

Lord ! Couldn't it all be only a bad dream?

In the cold light of early morning, the things of the past night looked somehow detached, unreal. She tried to analyse objectively.

That sense of sharing a mind, a consciousness, with the stranger who came out of the shadows – what crazy thing had he called it? – *'some sort of palpable biophysical energy-form, analytically definable.'*

'If I invented the stranger,' she thought, *'I must have also invented the words.'*

But where had she heard such words before?

Lisa went to the telephone and thumbed through the directory. No Grearly was listed. If he existed at all, he probably lived in a rooming house. The University – last night she had thought that he had something to do with the University. She lifted the phone and dialled.

'University Station; number please,' the operator said.

'I – uh – don't know the extension number. Could you tell me if there is a Kenneth Grearly connected with the school?'

'Student or faculty, Madam?'

'I don't know.'

'Give me your number, please, and I'll call you back.'

'Lawrence 4750. Thanks, Operator.'

She sat down to wait. Almost immediately it rang again.

'Hello?'

'Mrs Waverly, you were calling me?' A man's voice. His voice !

'The operator found you rather quickly.' It was the only thing she could think of saying.

'No, no. I knew you were calling. In fact, I hoped you into it.'

'Hoped me? Now look here, Mr Grearly, I – '

'You were trying to explain our phenomenon in terms of insanity rather than telepathy. I didn't want you to do that, and so I hoped you into calling me.'

Lisa was coldly speechless. 'What phenomenon are you talking about?' she asked after a few dazed seconds.

'Still repressing it? Listen, I can share your mind any time I want to, now that I understand where and who you are. You might as well face the fact. And it can work both ways, if you let it. Up to now, you've been – well, keeping your mind's eye closed, so to speak.'

Her scalp was crawling. The whole thing had become intensely disgusting to her.

'I don't know what you're up to, Mr Grearly, but I wish you'd stop it. I admit something strange is going on, but your explanation is ridiculous – offensive, even.'

He was silent for a long time, then: 'I wonder if the first man-ape found his prehensile thumb ridiculous. I wonder if he thought using his hands for grasping was offensive.'

'What are you trying to say?'

'That I think we're mutants. We're not the first ones. I had this same experience when I was in Boston once. There must be one of us there, too, but suddenly I got the feeling that he had committed suicide. I never saw him. We're probably the first ones to discover each other.'

'Boston? If what you say is true, what would distance have to do with it?'

'Well, if telepathy exists, it certainly involves transfer of energy from one point to another. What *kind* of energy, I don't know. Possibly electromagnetic in character. But it

seems likely that it would obey the inverse square law, like radiant energy-forms. I came to town about three weeks ago. I didn't feel you until I got close.'

'There is a connexion,' she thought. She had been wondering about the increased anxiety of the past three weeks.

'I don't know what you're talking about,' she evaded icily, though. 'I'm no mutant. I don't believe in telepathy. I'm not insane. Now let me alone.'

She slammed the telephone in its cradle and started to walk away.

Evidently he was angry for she was suddenly communicating with him again.

She reeled dizzily and clutched at the wall, because she was in two places at once, and the two settings merged in her mind to become a blur, like a double exposure. She was in her own hallway, and she was also in an office, looking at a calculator keyboard, hearing glassware rattling from across a corridor, aware of the smell of formaldehyde. There was a chart on the wall behind the desk and it was covered with strange tracery – schematics of some neural arcs. The office of the psychophysics lab. She closed her eyes, and her own hallway disappeared.

She felt anger – his anger.

'We've got to face this thing. If this is a new direction for human evolution, then we'd better study it and see what to do about it. I knew I was different and I became a psychophysicist to find out why. I haven't been able to measure much, but now with Lisa's help . . .'

She tried to shut him out. She opened her eyes and summoned her strength and tried to force him away. She stared at the bright doorway, but the tracery of neural arcs still remained. She fought him, but his mind lingered in hers.

'. . . perhaps we can get to the bottom of it. I know my

encephalograph recordings are abnormal, and now I can check them against hers. A few correlations will help. I'm glad to know about her soft fontanel. I wondered about mine. Now I think that underneath that fontanel lies a pattern of specialized neural –'

She sagged to the floor of the hall and babbled aloud: 'Hickory Dickory Dock, the mouse ran up the clock. The clock struck one –'

Slowly he withdrew. The laboratory office faded from her vision. His thoughts left her. She lay there panting for a time.

Had she won?

No, there was no sense in claiming victory. She had not driven him away. He had withdrawn of his own volition when he felt her babbling. She knew his withdrawal was free, because she had felt his parting state of mind: sadness. He had stopped the forced contact because he pitied her, and there was a trace of contempt in the pity.

She climbed slowly to her feet, looking around wildly, touching the walls and the door-frame to reassure herself that she was still in her own home. She staggered into the parlour and sat shivering on the sofa.

Last night! That crazy running around in the rain! He was responsible for that. He had hoped her into doing it, or maybe he had just wondered what she looked like undressed, and she had subconsciously satisfied his curiosity. He had planted the suggestion – innocently, perhaps – and she had unknowingly taken the cue.

He could be with her whenever he wanted to! He had been with her while she frollicked insanely in the rain-sodden grass! Perhaps he was with her now.

Whom could she talk to? Where could she seek help? Dr Mensley? He would immediately chalk it up as a delusion, and probably call for a sanity hearing if she wouldn't voluntarily enter a psycho-ward for observation.

The police? 'Sergeant, I want to report a telepathic prowler. A man is burglarizing my mind.'

A clergyman? He would shudder and refer her to a psychiatrist.

All roads led to the booby-hatch, it seemed. Frank wouldn't believe her. No one would believe her.

Lisa wandered through the day like a caged animal. She put on her brightest summer frock and a pert straw hat and went downtown. She wandered through the crowds in the business district, window-shopping. But she was alone. The herds of people about her brushed past and wandered on. A man whistled at her in front of a cigar store. A policeman waved her back to the kerb when she started across an intersection.

'Wake up, lady!' he called irritably.

People all about her, but she could not tell them, explain to them and so she was alone. She caught a taxi and went to visit a friend, the wife of an English teacher, and drank a glass of iced tea in the friend's parlour, and talked of small things, and admitted that she was tired when the friend suggested that she looked that way. When she went back home, the sun was sinking in the west.

She called long distance and talked to her mother, then spoke to her children, asked them if they were ready to come home, but they wanted to stay another week. They begged, and her mother begged, and she reluctantly consented. It had been a mistake to call. Now the kids would be gone even longer.

She tried to call Frank in St Louis, but the hotel clerk reported that he had just checked out. Lisa knew this meant he was on the road again.

'Maybe I ought to go join the kids at Mother's,' she thought. But Frank had wanted her to stay home. He was

expecting a registered letter from Chicago, and it was apparently important, and she had to take care of it.

'I'll invite somebody over,' she thought. But the wives were home with their husbands, and it was a social mistake to invite a couple when her husband was gone. It always wound up with two women yammering at each other while the lone male sat and glowered in uneasy isolation, occasionally disagreeing with his wife, just to let her know he was there and he was annoyed and bored and why didn't they go home? It was different if the business-widow called on a couple. Then the lone male could retire to some other part of the house to escape the yammering.

But she decided it wasn't company she wanted; she wanted help. And there was no place to get it.

When she allowed her thoughts to drift towards Kenneth Grearly, it was almost like tuning into a radio station. He was eating early dinner in the University cafeteria with a bedraggled, bespectacled brunette from the laboratory. Lisa closed her eyes and let herself sift gingerly into his thoughts. His attention was on the conversation and on the food, and he failed to realize Lisa's presence. That knowledge gave her courage.

He was eating Swiss steak and hashed brown potatoes, and the flavours formed perceptions in her mind. She heard the rattle of silverware, the low murmur of voices, and smelled the food. She marvelled at it. The strange ability had apparently been brought into focus by learning what it was and how to use it.

'Our work has been too empirical,' he was saying. 'We've studied phenomena, gathered data, looked for correlations. But that method has limitations. We should try to find a way to approach psychology from below. Like the invariantive approach to physics.'

The girl shook her head. 'The nervous system is too complicated for writing theoretical equations about it. Empirical equations are the best we can do.'

'They aren't good enough, Sarah. You can predict results with them, inside the limits of their accuracy. But you can't extrapolate them very well, and they won't stack up together into a single integrated structure. And when you're investigating a new field, they no longer apply. We need a broad mathematical theory, covering all hypothetically possible neural arrangements. It would let us predict not only results, but also predict patterns of possible order.'

'Seems to me the possible patterns are infinite.'

'No, Sarah. They're limited by the nature of the building blocks – neurons, synaptic connexions, and so forth. With limited materials, you have structural limitations. You don't build skyscrapers out of modelling clay. And there is only a finite number of ways you can build atoms out of electrons, protons, and neutrons. Similarly, brains are confined to the limitations of the things they're made of. We need a broad theory for defining the limits.'

'Why?'

'Because . . .' He paused. Lisa felt his urge to explain his urgency, felt him suppress it, felt for a moment his loneliness in the awareness of his uniqueness and the way it isolated him from humanity.

'You must be doing new work', the girl offered, 'if you feel the lack of such a theoretical approach. I just can't imagine an invariantive approach to psychology – or an all-defining set of laws for it, either. Why do you need such a psychological "Relativity"?'

He hesitated, frowning down at his plate, watching a fly crawl around its rim. 'I'm interested in – in the quantitative

aspects of nerve impulses. I – I suspect that there can be such a thing as neural resonance.'

She laughed politely and shook her head. 'I'll stick to my empirical data-gathering, thank you.'

Lisa felt him thinking:

'She could understand, if I could show her data. But my data are all subjective, experimental, personal. I share them with that Waverly woman, but she is only a social thinker, analytically shallow, refusing even to recognize facts. Why did it have to be her? She's flighty, emotional, and in a cultural rut. If she doesn't conform, she thinks she's nuts. But then at least she's a woman – and if this is really a mutation, we'll have to arrange for some children . . .'

Lisa gasped and sat bolt upright. Her shock revealed her presence to him, and he dropped his fork with a clatter.

'Lisa!'

She wrenched herself free of him abruptly. She angrily stalked about the house, slamming doors and muttering her rage. The nerve! The maddening, presumptuous, ill-mannered, self-centred, overly educated boor!

Arrange for some children indeed! An impossible situation!

As her anger gathered momentum, she contacted him again – like a snake striking. Thought was thunder out of a dark cloud.

'I'm decent and I'm respectable, Mr Grearly! I have a husband and three fine children and I love them, and you can go to hell! I never want to see you again or have you prowling around my mind. Get out and STAY *out. And if you ever bother me again – I'll – I'll kill you.'*

He was outdoors, striding across the campus alone. She saw the grey buildings, immersed in twilight, felt the wind on his face, hated him. He was thinking nothing, letting himself follow her angry flow of thought. When she finished, his thoughts began like the passionate pleading of a poem.

He was imagining a human race with telepathic abilities, in near-perfect communication with one another. So many of the world's troubles could be traced to imperfect communication of ideas, to misunderstandings.

Then he thought briefly of Sarah – the nondescript laboratory girl he had taken to dinner – and Lisa realized he was in love with Sarah. There was sadness and resentment here. He couldn't have Sarah now, not if he were to be certain of perpetuating the mutant characteristic. The Waverly woman ought to be good for three or four children yet, before she reached middle age.

Lisa stood transfixed by shock. Then he was thinking directly to her.

'I'm sorry. You're a beautiful, intelligent woman – but I don't love you. We're not alike. But I'm stuck with you and you're stuck with me, because I've decided it's going to be that way. I can't convince you since your thinking habits are already fixed, so I won't even try. I'm sorry it has to be against your will, but in any event it has to be. And now that I know what you're like, I don't dare wait – for fear you'll do something to mess things up.'

'No!' she screamed, watching the scenery that moved past his field of vision.

He had left the campus and was walking up the street – towards her neighbourhood. He was walking with the briskness of purpose. He was coming to her house.

'Call the police!' she thought, and tried to dissolve him out of her mind.

But this time he followed, clung to her thoughts, would not let her go. It was like two flashlight beams playing over a wall, one trying to escape, the other following its frantic circle of brightness.

She staggered, groped her way towards the hall, which

was confused with a superimposed image of a sidewalk and a street. A phantom automobile came out of the hall wall, drove through her, and vanished. Double exposures. He stared at a street light and it blinded her. At last she found the phone, but he was laughing at her.

'Eight seven six five twenty-one Mary had a little lamb seven seven sixty-seven yesterday was May March April . . .'

He was deliberately filling her mind with confusion. She fumbled at the directory, trying to find the police, but he thought a confused jumble of numbers and symbols, and they scampered across the page, blurring the letters.

She whimpered and groped at the phone dial, trying to get the operator, but he was doing something with his fingertips, and she couldn't get the feel of the dial.

On her third try, it finally worked.

'Information,' said a pleasant impersonal voice.

She had to get the police! She had to say –

'Pease porridge hot, pease porridge cold, pease porridge in the pot, nine days pretty polly parrot played peacefully plentiwise pease porridge . . .'

He was jamming her speech centres with gibberish, and she blurted nonsense syllables into the mouthpiece.

'You'll have to speak more distinctly, madam. I can't understand you.'

'Poress, Policer . . .'

'The police? Just a moment.'

A series of jumbled sounds and visions clouded her mind. Then a masculine voice rumbled, 'Desk, Sergeant Harris.'

She found a clear path through the confusion and gasped, 'Three-oh-oh-three Willow Drive – 'mergency – come quick – man going to – '

'Three-oh-oh-three Willow. Check. We'll have a car right over there.'

She hung up quickly – or tried to – but she couldn't find

the cradle. Then her vision cleared, and she screamed. She wasn't in the hall at all!

The telephone was an eggbeater!

His voice came through her trapped panic.

'You might as well give in,' he told her with a note of sadness. *'I know how to mess you up like that, you see. And you haven't learned to retaliate yet. We're going to cooperate with this evolutionary trend, whether you like it or not – but it would be more pleasant if you agree to it.'*

'No!'

'All right, but I'm coming anyway. I hoped it wouldn't be like this. I wanted to convince you gradually. Now I know that it's impossible.'

He was still ten blocks away. She had a few minutes in which to escape. She bolted for the door. A black shadow-shape loomed up in the twilight, flung its arms wide, and emitted an ape-like roar.

She yelped and darted back, fleeing frantically for the front. A boa constrictor lay coiled in the hall; it slithered towards her. She screamed again and raced towards the stairway.

She made it to the top and looked back. The living room was filling slowly with murky water. She rushed shrieking into the bedroom and bolted the door.

She smelled smoke. Her dress was on fire! The flames licked up, searing her skin.

She tore at it madly, and got it off, but her slip was afire. She ripped it away, scooped up the flaming clothing on a transom hook, opened the screen, and dropped them out of the window. Flames still licked about her, and she rolled up in the bed-clothing to snuff them out.

Quiet laughter.

'*New syndrome,*' he called to her pleasantly. '*The patient confuses someone else's fantasy with her own reality. Not schizophrenia – duophrenia, maybe?*'

She lay sobbing in hysterical desperation. He was just down the street now, coming rapidly up the walk. A car whisked slowly past. He felt her terrified despair and pitied her. The torment ceased.

She stayed there, panting for a moment, summoning spirit. He was nearing the intersection just two blocks south, and she could hear the rapid traffic with his ears.

Suddenly she clenched her eyes closed and gritted her teeth. He was stepping off the kerb, walking across –

She imagined a fire engine thundering towards her like a juggernaut, rumbling and wailing. She imagined another car racing out into the intersection, with herself caught in the crossfire. She imagined a woman screaming, 'Look out, Mister!'

And then she was caught in his own responding fright, and it was easier to imagine. He was bolting for the other corner. She conjured a third car from another direction, brought it lunging at him to avoid the impending wreck. He staggered away from the phantom cars and screamed.

A real car confused the scene.

She echoed his scream. There was a moment of rending pain, and then the vision was gone. Brakes were still yowling two blocks away. Someone was running down the sidewalk. A part of her mind had heard the crashing thud. She was desperately sick.

And a sudden sense of complete aloneness told her that Grearly was dead. A siren was approaching out of the distance.

Voices from the sidewalk: '... just threw a fit in the middle of the street ... running around like crazy and

hollering . . . it was a delivery truck . . . crushed his skull . . . nobody else hurt . . .'

After the street returned to normal, she arose and went to get a drink of water. But she stood staring at her sick white face in the mirror. There were crow's feet forming at the corners of her eyes, and her skin was growing tired, almost middle-aged.

It was funny that she should notice that now, at this strange moment. She had just killed a man in self-defence. And no one would believe it if she told the truth. There was no cause for guilt.

Was there?

Frank would be back soon, and everything would be the same again: peace, security, nice kids, nice home, nice husband. Just the way it always had been.

But something was already different. An emptiness. A loneliness of the mind that she had never before felt. She kept looking around to see if the lights hadn't gone dim, or the clock stopped ticking, or the faucet stopped dripping.

It was none of those things. The awful silence was within her.

Gingerly, she touched the soft spot in the top of her head and felt an utter aloneness. She closed her eyes and thought a hopeless plea to the Universe:

'Is there anybody else like me? Can anybody hear me?'

Nightfall

ISAAC ASIMOV

If the stars should appear one night in a thousand years, how would men believe and adore, and preserve for many generations the remembrance of the city of God! – Emerson.

ATON 77, director of Saro University, thrust out a belligerent lower lip and glared at the young newspaperman in fury.

Theremon 762 took that fury in his stride. In his earlier days, when his now widely syndicated column was only a mad idea in a cub reporter's mind, he had specialized in 'impossible' interviews. It had cost him bruises, black eyes, and broken bones; but it had given him an ample supply of coolness and self-confidence.

Aton 77 found his voice, and though it trembled with restrained emotion, the careful, somewhat pedantic, phraseology, for which the famous astronomer was noted, did not abandon him.

'Sir', he said, 'you display an infernal gall in coming to me with that impudent proposition of yours.'

The husky telephotographer of the Observatory, Beenay 25, thrust a tongue's tip across dry lips and interposed nervously, 'Now, sir, after all – '

The director turned to him and lifted a white eyebrow. 'Do not interfere, Beenay. I credit you with good intentions in bringing this man here; but I will tolerate no insubordination now.'

Theremon decided it was time to take a part. 'Director Aton, if you'll let me finish what I started saying I think – '

'I don't believe, young man,' retorted Aton, 'that anything

you could say now would count much as compared with your daily columns of these last two months. You have led a vast newspaper campaign against the efforts of myself and my colleagues to organize the world against the menace which it is now too late to avert. You may leave,' he snapped over his shoulder. He stared moodily out at the skyline where Gamma, the brightest of the planet's six suns, was setting. It had already faded and yellowed into the horizon's mists, and Aton knew he would never see it again as a sane man.

He whirled. 'No, wait, come here!' He gestured peremptorily. 'I'll give you your story.'

The newsman had made no motion to leave, and now he approached the old man slowly. Aton gestured outward. 'Of the six suns, only Beta is left in the sky. Do you see it?'

The question was rather unnecessary. Beta was almost at zenith; its ruddy light flooding the landscape to an unusual orange as the brilliant rays of setting Gamma died. Beta was at aphelion. It was small; smaller than Theremon had ever seen it before, and for the moment it was undisputed ruler of Lagash's sky.

Lagash's own sun, Alpha, the one about which it revolved, was at the antipodes; as were the two distant companion pairs. The red dwarf Beta – Alpha's immediate companion – was alone, grimly alone.

Aton's upturned face flushed redly in the sunlight. 'In just under four hours,' he said, 'civilization, as we know it, comes to an end. It will do so because, as you see, Beta is the only sun in the sky.' He smiled grimly. 'Print that! There'll be no one to read it.'

'But if it turns out that four hours pass – and another four – and nothing happens?' asked Theremon softly.

'Don't let that worry you. Enough will happen.'

'Granted! And *still* – if nothing happens?'

For a second time, Beenay 25 spoke, 'Sir, I think you ought to listen to him.'

Theremon said, 'Put it to a vote, Director Aton.'

There was a stir among the remaining five members of the Observatory staff, who until now had maintained an attitude of wary neutrality.

'That', stated Aton flatly, 'is not necessary.' He drew out his pocket watch. 'Since your good friend, Beenay, insists so urgently, I will give you five minutes. Talk away.'

'Good! Now, just what difference would it make if you allowed me to take down an eyewitness account of what's to come? If your prediction comes true, my presence won't hurt; for in that case my column would never be written. On the other hand, if nothing comes of it, you will just have to expect ridicule or worse. It would be wise to leave that ridicule to friendly hands.'

Aton snorted. 'Do you mean yours when you speak of friendly hands?'

'Certainly!' Theremon sat down and crossed his legs. 'My columns may have been a little rough at times, but I gave you people the benefit of the doubt every time. After all, this is not the century to preach "the end of the world is at hand" to Lagash. You have to understand that people don't believe the "Book of Revelations" any more, and it annoys them to have scientists turn about face and tell us the Cultists are right after all –'

'No such thing, young man,' interrupted Aton. 'While a great deal of our data has been supplied us by the Cult, our results contain none of the Cult's mysticism. Facts are facts, and the Cult's so-called "mythology" *has* certain facts behind it. We've exposed them and ripped away their mystery. I assure you that the Cult hates us now worse than you do.'

'I don't hate you. I'm just trying to tell you that the public is in an ugly humour. They're angry.'

Aton twisted his mouth in derision. 'Let them be angry.'

'Yes, but what about tomorrow?'

'There'll be no tomorrow!'

'But if there is. Say that there is – just to see what happens. That anger might take shape into something serious. The sparks will fly, sir.'

The director regarded the columnist sternly. 'And just what were you proposing to do to help the situation?'

'Well,' grinned Theremon, 'I was proposing to take charge of the publicity. I can handle things so that only the ridiculous side will show. It would be hard to stand, I admit, because I'd have to make you all out to be a bunch of idiots, but if I can get people laughing at you, they might forget to be angry. In return for that, all my publisher asks is an exclusive story.'

Beenay nodded and burst out. 'Sir, the rest of us think he's right. These last two months we've considered everything but the million-to-one chance that there is an error somewhere in our theory or in our calculations. We ought to take care of that, too.'

There was a murmur of agreement from the men grouped about the table, and Aton's expression became that of one who found his mouth full of something bitter and couldn't get rid of it.

'You may stay if you wish, then. You will kindly refrain, however, from hampering us in our duties in any way.'

His hands were behind his back, and his wrinkled face thrust forward determinedly as he spoke. He might have continued indefinitely but for the intrusion of a new voice.

'Hello, hello, hello!' It came in a high tenor, and the plump cheeks of the newcomer expanded in a pleased smile.

'What's this morgue-like atmosphere about here? No one's losing his nerve, I hope.'

Aton started in consternation and said peevishly, 'Now what the devil are you doing here, Sheerin? I thought you were going to stay behind in the Hideout.'

Sheerin laughed and dropped his tubby figure into a chair. 'I wanted to be here, where things are getting hot. Don't you suppose I have my share of curiosity? I want to see these Stars the Cultists are forever speaking about. A psychologist isn't worth his salt in the Hideout. They need men of action and strong, healthy women that can breed children. Me? I'm a hundred pounds too heavy for a man of action, and I wouldn't be a success at breeding children. So why bother them with an extra mouth to feed? I feel better over here.'

Theremon spoke briskly, 'Just what is the Hideout, sir?'

Sheerin seemed to see the columnist for the first time. He frowned and blew his ample cheeks out, 'And just who in Lagash are you, redhead?'

Aton compressed his lips and then muttered sullenly, 'That's Theremon 762, the newspaper fellow. I suppose you've heard of him.'

The columnist offered his hand. 'And, of course, you're Sheerin 501 of Saro University. I've heard of *you*.' Then he repeated, 'What is this Hideout, sir?'

'Well,' said Sheerin, 'we have managed to convince a few people of the validity of our prophecy of – er – doom, to be spectacular about it, and those few have taken proper measures. They consist mainly of the immediate members of the families of the Observatory staff, certain of the faculty of Saro University and a few outsiders. Altogether, they number about three hundred, but three-quarters are women and children.'

'I see! They're supposed to hide where the Darkness and

the – er – Stars can't get at them, and then hold out when the rest of the world goes poof.'

'If they can. It won't be easy. With all of mankind insane; with the great cities going up in flames – environment will not be conducive to survival. But they have food, water, shelter, and weapons – '

'They've got more,' said Aton. 'They've got all our records, except for what we will collect today. Those records will mean everything to the next cycle, and *that's* what must survive. The rest can go hang.'

Theremon whistled a long, low whistle and sat brooding for several minutes. The men about the table had brought out a multi-chess board and started a six-member game. Moves were made rapidly and in silence. All eyes bent in furious concentration on the board. Theremon watched them intently and then rose and approached Aton, who sat apart in whispered conversation with Sheerin.

'Listen,' he said. 'Let's go somewhere where we won't bother the rest of the fellows. I want to ask some questions.'

There *were* softer chairs in the next room. There were also thick red curtains on the windows and a maroon carpet on the floor. With the bricky light of Beta pouring in, the general effect was one of dried blood.

Theremon shuddered. 'Say, I'd give ten credits for a decent dose of white light for just a second. I wish Gamma or Delta were in the sky.'

'What are your questions?' asked Aton. 'Please remember that our time is limited. In a little over an hour and a quarter we're going upstairs, and after that there will be no time for talk.'

'Well, here it is.' Theremon leaned back and folded his hands on his chest. 'You say that there is going to be a world-wide Darkness in a few hours and that all mankind will go

violently insane. What I want now is the science behind it.'

'No, you don't. No, you don't,' broke in Sheerin. 'If you ask Aton for that – supposing him to be in the mood to answer at all – he'll trot out pages of figures and volumes of graphs. You won't make head or tail of it. Now if you were to ask *me*, I could give you the layman's standpoint.'

'All right; I ask you.'

'Then first I'd like a drink.' He rubbed his hands and looked at Aton.

'Water?' grunted Aton.

'Don't be silly!'

'Don't you be silly. No alcohol today. It would be too easy to get my men drunk. I can't afford to tempt them.'

The psychologist grumbled wordlessly. He turned to Theremon, impaled him with his sharp eyes, and began.

'You realize of course, that the history of civilization on Lagash displays a cyclic character – but I mean, *cyclic!*'

'I know', replied Theremon cautiously, 'that that is the current archaeological theory. Has it been accepted as a fact?'

'Just about. In this last century it's been generally agreed upon. This cyclic character is – or, rather, was – one of *the* great mysteries. We've located series of civilizations, nine of them definitely, and indications of others as well, all of which have reached heights comparable to our own, and all of which, without exception, were destroyed by fire at the very height of their culture.

'And no one could tell why. All centres of culture were thoroughly gutted by fire, with nothing left behind to give a hint as to the cause.'

Theremon was following closely. 'Wasn't there a Stone Age, too?'

'Probably, but as yet, practically nothing is known of it,

except that men of that age were little more than rather intelligent apes. We can forget about that.'

'I see. Go on!'

'There have been explanations of these recurrent catastrophes, all of a more or less fantastic nature. Some say that there are periodic rains of fire; some that Lagash passes through a sun every so often; some even wilder things. But there is one theory, quite different from all of these, that has been handed down over a period of centuries.'

'I know. You mean this myth of the "Stars" that the Cultists have in their "Book of Revelation".'

'Exactly,' rejoined Sheerin with satisfaction. 'The Cultists said that every two thousand and fifty years Lagash entered a huge cave, so that all the suns disappeared, and there came *total darkness all over the world!* And then, they say, things called Stars appeared, which robbed men of their souls and left them unreasoning brutes, so that they destroyed the civilization they themselves had built up. Of course, they mix all this up with a lot of religio-mystic notions, but that's the central idea.'

There was a short pause in which Sheerin drew a long breath. 'And now we come to the Theory of Universal Gravitation.' He pronounced the phrase so that the capital letters sounded – and at that point Aton turned from the window, snorted loudly, and stalked out of the room.

The two stared after him, and Theremon said 'What's wrong?'

'Nothing in particular,' replied Sheerin. 'Two of the men were due several hours ago and haven't shown up yet. He's terrifically shorthanded, of course, because all but the really essential men have gone to the Hideout.'

'You don't think the two deserted, do you?'

'Who? Faro and Yimot? Of course not. Still, if they're

not back within the hour, things would be a little sticky.' He got to his feet suddenly, and his eyes twinkled. 'Anyway, as long as Aton is gone – '

Tiptoeing to the nearest window, he squatted, and from the low window box beneath withdrew a bottle of red liquid that gurgled suggestively when he shook it.

'I *thought* Aton didn't know about this,' he remarked as he trotted back to the table. 'Here ! We've only got one glass so, as the guest, you can have it. I'll keep the bottle.' And he filled the tiny cup with judicious care.

The psychologist's Adam's apple wobbled as the bottle upended, and then, with a satisfied grunt and a smack of the lips, he began again.

'But what do you know about gravitation?'

'Nothing, except that it is a very recent development, not too well established, and that the math is so hard that only twelve men in Lagash are supposed to understand it.'

'*Tcha!* Nonsense ! Boloney ! I can give you all the essential math in a sentence. The Law of Universal Gravitation states that there exists a cohesive force among all bodies of the universe, such that the amount of this force between any two given bodies is proportional to the product of their masses divided by the square of the distance between them.'

'Is that all?'

'That's enough ! It took four hundred years to develop it.'

'Why that long? It sounded simple enough, the way you said it.'

'Because great laws are not divined by flashes of inspiration, whatever you may think. It usually takes the combined work of a world full of scientists over a period of centuries. After Genovi 41 discovered that Lagash rotated about the sun Alpha, rather than vice versa – and that was four hundred years ago – astronomers have been working. The complex motions of the six suns were recorded and analysed

and unwoven. Theory after theory was advanced and checked and counter-checked and modified and abandoned and revived and converted to something else. It was a devil of a job.'

Theremon nodded thoughtfully and held out his glass for more liquor. Sheerin grudgingly allowed a few ruby drops to leave the bottle.

'It was twenty years ago', he continued after remoistening his own throat, 'that it was finally demonstrated that the Law of Universal Gravitation accounted exactly for the orbital motions of the six suns. It was a great triumph.'

Sheerin stood up and walked to the window, still clutching his bottle, 'And now we're getting to the point. In the last decade, the motions of Lagash about Alpha were computed according to gravity, and *it did not account for the orbit observed*; not even when all perturbations due to the other suns were included. Either the law was invalid, or there was another, as yet unknown, factor involved.'

Theremon joined Sheerin at the window and gazed out past the wooded slopes to where the spires of Saro City gleamed bloodily on the horizon. The newsman felt the tension of uncertainty grow within him as he cast a short glance at Beta. It glowered redly at zenith, dwarfed and evil.

'Go ahead, sir,' he said softly.

Sheerin replied, 'Astronomers stumbled about for years, each proposed theory more untenable than the one before – until Aton had the inspiration of calling in the Cult. The head of the Cult, Sor 5, had access to certain data that simplified the problem considerably. Aton set to work on a new track.

'What if there were another non-luminous planetary body such as Lagash? If there were, you know, it would shine

only by reflected light, and if it were composed of bluish rock, as Lagash itself largely is, then, in the redness of the sky, the eternal blaze of the suns would make it invisible – drown it out completely.'

Theremon whistled, 'What a screwy idea!'

'You think *that's* screwy? Listen to this: Suppose this body rotated about Lagash at such a distance and in such an orbit and had such a mass that its attraction would exactly account for the deviations of Lagash's orbit from theory – do you know what would happen?'

The columnist shook his head.

'Well, sometimes this body would get in the way of the sun.' And Sheerin emptied what remained in the bottle at a draught.

'And it does, I suppose,' said Theremon flatly.

'Yes! But only one sun lies in its plane of revolutions.' He jerked a thumb at the shrunken sun above. 'Beta! And it has been shown that the eclipse will occur only when the arrangement of the suns is such that Beta is alone in its hemisphere and at maximum distance, at which time the moon is invariably at minimum distance. The eclipse that results with the moon seven times the apparent diameter of Beta, covers all of Lagash and lasts well over half a day, so that no spot on the planet escapes the effects. *That eclipse comes once every two thousand and forty-nine years.*'

Theremon's face was drawn into an expressionless mask. 'And that's my story?'

The psychologist nodded. 'That's all of it. First the eclipse – which will start in three-quarters of an hour – then universal Darkness, and, maybe, these mysterious Stars – then madness, and the end of the cycle.'

He brooded. 'We had two months' leeway – we at the Observatory – and that wasn't enough time to persuade Lagash of the danger. Two centuries might not have been

enough. But our records are at the Hideout, and today we photograph the eclipse. The next cycle will *start off* with the truth, and when the *next* eclipse comes, mankind will at last be ready for it. Come to think of it, that's part of your story, too.'

A thin wind ruffled the curtains at the window as Theremon opened it and leaned out. It played coldly with his hair as he stared at the crimson sunlight on his hand. Then he turned in sudden rebellion.

'What is there in Darkness to drive *me* mad?'

Sheerin smiled to himself as he spun the empty liquor bottle with abstracted motions of his hand. 'Have you ever experienced Darkness, young man?'

The newsman leaned against the wall and considered. 'No. Can't say I have. But I know what it is. Just – uh – ' He made vague motions with his fingers, and then brightened. 'Just no light. Like in caves.'

'Have you ever been in a cave?'

'In a *cave*! Of course not!'

The psychologist studied the young man with a frown.

'I dare you to draw the curtain.'

Theremon looked his surprise and said, 'What for? If we had four or five suns out there we might want to cut the light down a bit for comfort, but now we haven't enough light as it is.'

'That's the point. Just draw the curtain; then come here and sit down.'

'All right.' Theremon reached for the tasseled string and jerked. The red curtain slid across the wide window, the brass rings hissing their way along the crossbar, and a dusk-red shadow clamped down on the room.

Theremon's footsteps sounded hollowly in the silence as he made his way to the table, and then he stopped half-way. 'I can't see you, sir,' he whispered.

'Feel your way,' ordered Sheerin in a strained voice.

'But I can't see you, sir,' the newsman was breathing harshly. 'I can't see anything.'

'What did you expect?' came the grim reply. 'Come here and sit down!'

The footsteps sounded again, waveringly, approaching slowly. There was the sound of someone fumbling with a chair. Theremon's voice came thinly, 'Here I am. I feel ... *ulp* ... all right.'

'You like it, do you?'

'N-no. It's pretty awful. The walls seem to be – ' He paused. 'They seem to be closing in on me. I keep wanting to push them away. But I'm not going *mad*! In fact, the feeling isn't as bad as it was.'

'All right. Draw the curtains back again.'

There were cautious footsteps through the dark, the rustle of Theremon's body against the curtain as he felt for the tassel, and then the triumphant *ro-o-o-osh* of the curtain slithering back. Red light flooded the room, and with a cry of joy Theremon looked up at the sun.

Sheerin wiped the moistness off his forehead with the back of a hand and said shakily, 'And that was just a dark room.'

'It can be stood,' said Theremon lightly.

'Yes, a dark room can. But were you at the Jonglor Centennial Exposition two years ago?'

'No, it so happens I never got around to it. Six thousand miles was just a bit too much to travel, even for the exposition.'

'Well, I was there. You remember hearing about the "Tunnel of Mystery" that broke all records in the amusement area – for the first month or so, anyway?'

'Yes. Wasn't there some fuss about it?'

'Very little. It was hushed up. You see, that Tunnel of

Mystery was just a mile-long tunnel – with no lights. You got into a little open car and jolted along through Darkness for fifteen minutes. It was very popular – while it lasted.'

'Popular?'

'Certainly. There's a fascination in being frightened *when it's part of a game.* A baby is born with three instinctive fears: of loud noises, of falling, and of the absence of light. That's why it's considered so funny to jump at someone and shout "Boo!" That's why it's such fun to ride a roller coaster. And that's why that Tunnel of Mystery started cleaning up. People came out of that Darkness shaking, breathless, halt dead with fear, but they kept on paying to get in.'

'Wait a while, I remember now. Some people came out dead, didn't they? There were rumours of that after it shut down.'

The psychologist snorted. 'Bah! Two or three died. That was nothing! They paid off the families of the dead ones and argued the Jonglor City Council into forgetting it. After all, they said, if people with weak hearts want to go through the tunnel, it was at their own risk – and besides, it wouldn't happen again. So they put a doctor in the front office and had every customer go through a physical examination before getting into the car. That actually *boosted* ticket sales.'

'Well, then?'

'But, you see, there was something else. People sometimes came out in perfect order, except that they refused to go into buildings – any buildings; including palaces, mansions, apartment houses, tenements, cottages, huts, shacks, lean-tos, and tents.'

Theremon looked shocked. 'You mean they refused to come in out of the open. Where'd they sleep?'

'In the open.'

'They should have *forced* them inside.'

'Oh, they did, they did. Whereupon these people went into violent hysterics and did their best to beat their brains out against the nearest wall. Once you got them inside, you couldn't keep them there without a strait jacket and a shot of morphine.'

'They must have been crazy.'

'Which is exactly what they were. One person out of every ten who went into that tunnel came out that way. They called in the psychologists, and we did the only thing possible. We closed down the exhibit.' He spread his hands.

'What was the matter with these people?' asked Theremon finally.

'Those people were unfortunates whose mentality did not quite possess the resiliency to overcome the claustrophobia that overtook them in the Darkness. Fifteen minutes without light is a long time; you had only two or three minutes, and I believe you were fairly upset.

'The people of the tunnel had what is called a "claustrophobic fixation". Their latent fear of Darkness and enclosed places had crystallized and become active, and, as far as we can tell, permanent. *That's* what fifteen minutes in the dark will do.'

There was a long silence, and Theremon's forehead wrinkled slowly into a frown. 'I don't believe it's that bad.'

'You mean you don't want to believe,' snapped Sheerin. 'You're afraid to believe. Look out the window!'

Theremon did so, and the psychologist continued without pausing, 'Imagine Darkness – everywhere. No light, as far as you can see. The houses, the trees, the fields, the earth, the sky – *black*! And Stars thrown in, for all I know – whatever *they* are. Can you conceive it?"

'Yes, I can,' declared Theremon truculently.

And Sheerin slammed his fist down upon the table in

sudden passion. 'You lie! You can't conceive that. Your brain wasn't built for the conception any more than it was built for the conception of infinity or of eternity. You can only talk about it. A fraction of the reality upsets you, and when the real thing comes, your brain is going to be presented with a phenomenon outside its limits of comprehension. You will go mad, completely and permanently! There is no question of it!'

He added sadly, 'And another couple of millenniums of painful struggle comes to nothing. Tomorrow there won't be a city standing unharmed in all Lagash.'

Theremon recovered part of his mental equilibrium. 'That doesn't follow. I still don't see that I can go loony just because there isn't a Sun in the sky – but even if I did, and everyone else did, how does that harm the cities? Are we going to blow them down?'

But Sheerin was angry, too. 'If you were in Darkness, what would you want more than anything else; what would it be that every instinct would call for? Light, damn you, *light!*'

'Well?'

Sheerin said, 'You'd burn something, mister. Ever see a forest fire? Ever go camping and cook a stew over a wood fire? Heat isn't the only thing burning wood gives off, you know. It gives off light, and people know that. And when it's dark they want light, and they're going to *get it.*'

'So they burn wood?'

'So they burn whatever they can get. They've got to have light. They've got to burn something, and wood isn't handy – so they'll burn whatever is nearest. They'll have their light – and every centre of habitation goes up in flames!'

Theremon broke away wordlessly. His breathing was harsh and ragged, and he scarcely noted the sudden hubbub that came from the adjoining room behind the closed door.

Sheerin spoke, and it was with an effort that he made it sound matter-of-fact. 'I think I heard Yimot's voice. He and Faro are probably back. Let's go in and see what kept them.'

'Might as well!' muttered Theremon. He drew a long breath and seemed to shake himself. The tension was broken.

The room was in an uproar, with members of the staff clustering about two young men who were removing outer garments even as they parried the miscellany of questions being thrown at them.

Aton bustled through the crowd and faced the newcomers angrily. 'Do you realize that it's less than half an hour before deadline? Where have you two been?'

Faro 24 seated himself and rubbed his hands. His cheeks were red with the outdoor chill. 'Yimot and I have just finished carrying through a little crazy experiment of our own. We've been trying to see if we couldn't construct an arrangement by which we could simulate the appearance of Darkness and Stars so as to get an advance notion as to how it looked.'

There was a confused murmur from the listeners, and a sudden look of interest entered Aton's eyes. 'There wasn't anything said of this before. How did you go about it?'

'Well,' said Faro, 'the idea came to Yimot and myself long ago and we've been working it out in our spare time. Yimot knew of a low one-storey house down in the city with a domed roof – it had once been used as a museum, I think. Anyway, we bought the place and rigged it up with black velvet from top to bottom so as to get as perfect a Darkness as possible. Then we punched tiny holes in the ceiling and through the roof and covered them with little metal caps, all of which could be shoved aside simultaneously at the close of a switch. At least, we didn't do that part ourselves; we got a carpenter and an electrician and some others –

money didn't count. The point was that we could get the light to shine through those holes in the roof, so that we could get a starlike effect.'

Not a breath was drawn during the pause that followed. Aton said stiffly:

'You had no right to make a private – '

Faro seemed abashed. 'I know, sir – but, frankly, Yimot and I thought the experiment was a little dangerous. If the effect really worked, we half expected to go mad – from what Sheerin says about all this, we thought that would be rather likely. We wanted to take the risk ourselves.'

'Why, what happened?'

It was Yimot who answered. 'We shut ourselves in and allowed our eyes to get accustomed to the dark. It's an extremely creepy feeling because the total Darkness makes you feel as if the walls and ceiling are crushing in on you. But we got over that and pulled the switch. The caps fell away and the roof glittered all over with little dots of light – '

'Well?'

'Well – nothing. That was the whacky part of it. Nothing happened. It was a roof with holes in it, and that's just what it looked like. We tried it over and over again – that's what kept us so late – but there just isn't any effect at all.'

There followed a shocked silence, and all eyes turned to Sheerin, who sat motionless, mouth open.

Theremon was the first to speak. 'You know what this does to this whole theory you've built up, Sheerin, don't you?' He was grinning with relief.

But Sheerin raised his hand. 'Now wait a while. Just let me think this through.' And then he snapped his fingers, and when he lifted his head there was neither surprise nor uncertainty in his eyes. 'Of course – '

He never finished. From somewhere up above there sounded

a sharp clang, and Beenay, starting to his feet, dashed up the stairs with a 'What the devil!'

The rest followed after.

Things happened quickly. Once up in the dome, Beenay cast one horrified glance at the shattered photographic plates and at the man bending over them; and then hurled himself fiercely at the intruder, getting a death grip on his throat. There was a wild threshing, and as others of the staff joined in, the stranger was swallowed up and smothered under the weight of half a dozen angry men.

Aton came up last, breathing heavily. 'Let him up!'

There was a reluctant unscrambling and the stranger, panting harshly, with his clothes torn and his forehead bruised, was hauled to his feet. He had a short yellow beard curled elaborately in the style affected by the Cultists.

Beenay shifted his hold to a collar grip and shook the man savagely. 'All right, rat, what's the idea? These plates – '

'I wasn't after *them*,' retorted the Cultist coldly. 'That was an accident.'

Beenay followed his glowering stare and snarled, 'I see. You were after the cameras themselves. The accident with the plates was a stroke of luck for you, then. If you had touched Snapping Bertha or any of the others, you would have died by slow torture. As it is – ' He drew his fist back.

Aton grabbed his sleeve. 'Stop that! Let him go!'

The young technician wavered, and his arm dropped reluctantly. Aton pushed him aside and confronted the Cultist. 'You're Latimer, aren't you?'

The Cultist bowed stiffly and indicated the symbol upon his hip. 'I am Latimer 25, adjutant of the third class to His Serenity, Sor 5.'

'And' – Aton's white eyebrows lifted – 'you were with

His Serenity when he visited me last week, weren't you?'

Latimer bowed a second time.

Sheerin smiled in a friendly fashion. 'You're a determined cuss, aren't you? Well, I'll explain something. Do you see that young man at the window? He's a strong, husky fellow, quite handy with his fists, and he's an outsider besides. Once the eclipse starts there will be nothing for him to do except keep an eye on you. Beside him, there will be myself – a little too stout for active fisticuffs, but still able to help.'

Sheerin nodded to the columnist. 'Take a seat next to him, Theremon – just as a formality. Hey, Theremon!'

But the newspaperman didn't move. He had gone pale to the lips. 'Look at that!' The finger he pointed towards the sky shook, and his voice was dry and cracked.

There was one simultaneous gasp as every eye followed the pointing finger and, for one breathless moment, stared frozenly.

Beta was chipped on one side!

The tiny bit of encroaching blackness was perhaps the width of a fingernail, but to the staring watchers it magnified itself into the crack of doom.

Only for a moment they watched, and after that there was a shrieking confusion that was even shorter in duration and which gave way to an orderly scurry of activity – each man at his prescribed job. At the crucial moment there was no time for emotion. The men were merely scientists with work to do. Even Aton had melted away.

Sheerin said prosaically, 'First contact must have been made fifteen minutes ago. A little early, but pretty good considering the uncertainties involved in the calculation.' He looked about him and then tiptoed to Theremon, who still remained staring out of the window, and dragged him away gently.

'Aton is furious,' he whispered, 'so stay away. He missed

first contact on account of this fuss with Latimer, and if you get in his way he'll have you thrown out the window.'

Theremon nodded shortly and sat down. Sheerin stared in surprise at him.

'The devil, man,' he exclaimed, 'you're shaking.'

'Eh?' Theremon licked dry lips and then tried to smile. 'I don't feel very well, and that's a fact.'

The psychologist's eyes hardened. 'You're not losing your nerve?'

'No!' cried Theremon in a flash of indignation. 'Give me a chance, will you? I haven't really believed this rigmarole – not way down beneath, anyway – till just this minute. Give me a chance to get used to the idea. *You've* been preparing yourself for two months or more.'

'You're right, at that,' replied Sheerin thoughtfully.

'You think I'm scared stiff, don't you? Well, get this, mister. I'm a newspaperman and I've been assigned to cover a story. I intend covering it.'

There was a faint smile on the psychologist's face. 'I see. Professional honour, is that it?'

'You might call it that. But, man, I'd give my right arm for another bottle of that sockeroo juice even half the size of the one *you* hogged. If ever a fellow needed a drink, I do.'

He broke off. Sheerin was nudging him violently. 'Do you hear that? Listen!'

Theremon followed the motion of the other's chin and stared at the Cultist, who, oblivious to all about him, faced the window, a look of wild elation on his face, droning to himself the while in singsong fashion.

'What's he saying?' whispered the columnist.

'He's quoting "Book of Revelations," fifth chapter,' replied Sheerin. Then, urgently, 'Keep quiet and listen, I tell you.'

The Cultist's voice had risen in a sudden increase of fervour.

' "And it came to pass that in those days the Sun, Beta, held lone vigil in the sky for ever longer periods as the revolutions passed; until such time as for full half a revolution, it alone, shrunken and cold, shone down upon Lagash.

' "And in the city of Trigon, at high noon, Vendret 2 came forth and said unto the men of Trigon, 'Lo, ye sinners! Though ye scorn the ways of righteousness, yet will the time of reckoning come. Even now the Cave approaches to swallow Lagash; yea, and all it contains.'

' "And even as he spoke the lip of the Cave of Darkness passed the edge of Beta so that to all Lagash it was hidden from sight. Loud were the cries of men as it vanished, and great the fear of soul that fell upon them.

' "It came to pass that the Darkness of the Cave fell upon Lagash, and there was no light on all the surface of Lagash. Men were even as blinded, nor could one man see his neighbour, though he felt his breath upon his face.

' "And in this blackness there appeared the Stars, in countless numbers, and to the strains of ineffable music of a beauty so wondrous that the very leaves of the trees turned to tongues that cried out in wonder.

' "And in that moment the souls of men departed from them, and their abandoned bodies became even as beasts; yea, even as brutes of the wild; so that through the blackened streets of the cities of Lagash they prowled with wild cries.

' "From the Stars there then reached down the Heavenly Flame, and where it touched, the cities of Lagash flamed to utter destruction, so that of man and of the works of man nought remained.

' "Even then – " '

There was a subtle change in Latimer's tone. His eyes had not shifted, but somehow he had become aware of the absorbed attention of the other two. Easily, without pausing

for breath, the timbre of his voice shifted and the syllables became more liquid.

Theremon, caught by surprise, stared. The words seemed on the border of familiarity. There was an elusive shift in the accent, a tiny change in the vowel stress; nothing more – yet Latimer had become thoroughly unintelligible.

Sheerin smiled slyly. 'He shifted to some old-cycle tongue, probably their traditional second cycle. That was the language in which the Book of Revelations was originally written, you know.'

'It doesn't matter; I've heard enough.' Theremon moved his chair and brushed his hair back with hands that no longer shook. 'I feel much better now.'

'You do?' Sheerin seemed mildly surprised.

'I'll say I do. I had a bad case of jitters just a while back. Listening to you and your gravitation and seeing that eclipse start almost finished me. But this –' he jerked a contemptuous thumb at the yellow-bearded Cultist – '*this* is the sort of thing my nurse used to tell me. I've been laughing at that sort of thing all my life. I'm not going to let it scare me *now*.'

He drew a deep breath and said with a hectic gaiety, 'But if I expect to keep on the good side of myself, I'm going to turn my chair away from the window.'

With elaborate care he turned the chair from the window, cast one distasteful look over his shoulder and said, 'It has occurred to me that there must be considerable immunity against this Star madness.'

The psychologist did not answer immediately. Beta was past its zenith now, and the square of bloody sunlight that outlined the window upon the floor had lifted into Sheerin's lap. He stared at its dusky colour thoughtfully, and then bent and squinted into the sun itself.

The chip in its side had grown to a black encroachment that covered a third of Beta. He shuddered, and when he

straightened once more his florid cheeks did not contain quite as much colour as they had previously.

With a smile that was almost apologetic, he reversed his chair also. 'There are probably two million people in Saro City that are all trying to join the Cult at once in one gigantic revival.' Then, ironically, 'The Cult is in for an hour of unexampled prosperity. I trust they'll make the most of it. Now, what was it you said?'

'Just this. How do the Cultists manage to keep the "Book of Revelations" going from cycle to cycle, and how on Lagash did it get written in the first place? There must have been some sort of immunity, for if everyone had gone mad, who would be left to write the book?'

'Naturally, the book was based, in the first place, on the testimony of those least qualified to serve as historians; that is, children and morons; and was probably extensively edited and re-edited through the cycles.'

'Do you suppose', broke in Theremon, 'that they carried the book through the cycles the way we're planning on handing on the secret of gravitation?'

Sheerin shrugged. 'Perhaps, but their exact method is unimportant. They do it, somehow. The point I was getting at was that the book can't help but be a mass of distortion, even if it is based on fact. For instance, do you remember the experiment with the holes in the roof that Faro and Yimot tried – the one that didn't work?'

'Yes.'

'You know why it didn't w – ' He stopped and rose in alarm, for Aton was approaching, his face a twisted mask of consternation.

'*What's happened?*'

Aton drew him aside and Sheerin could feel the fingers on his elbow twitching.

'Not so loud!' Aton's voice was low and tortured. 'I've just gotten word from the Hideout on the private line.'

Sheerin broke in anxiously. 'They are in trouble?'

'Not *they*.' Aton stressed the pronoun significantly. 'They sealed themselves off just a while ago, and they're going to stay buried till the day after tomorrow. They're safe. But the *city*, Sheerin – it's a shambles. You have no idea – ' He was having difficulty in speaking.

'Well?' snapped Sheerin impatiently. 'What of it? It will get worse. What are you shaking about?' Then, suspiciously, 'How do you feel?'

Aton's eyes sparked angrily at the insinuation, and faded to anxiety once more. 'You don't understand. The Cultists are active. They're rousing the people to storm the Observatory – promising them immediate entrance into grace, promising them salvation, promising them anything. What are we to do, Sheerin?'

'There's nothing to do but gamble. It will take time to organize any really formidable mob, and it will take more time to get them out here. We're a good five miles from the city –'

He glared out the window, down the slopes to where the farmed patches gave way to clumps of white houses in the suburbs; down to where the metropolis itself was a blur on the horizon – a mist in the waning blaze of Beta.

He repeated without turning, 'It will take time. Keep on working and pray that totality comes first.'

Beta was cut in half, the line of division pushing a slight concavity into the still-bright portion of the Sun. It was like a gigantic eyelid shutting slantwise over the light of the world.

The faint clatter of the room in which he stood faded into oblivion, and he sensed only the thick silence of the fields outside. The very insects seemed frightened mute. And things were dim.

He jumped at the voice in his ear. Theremon said, 'Is something wrong?'

'Eh? Er – no. Get back to the chair. We're in the way.' They slipped back to their corner, but the psychologist did not speak for a time. He lifted a finger and loosened his collar. He twisted his neck back and forth but found no relief. He looked up suddenly.

'Are you having any difficulty in breathing?'

The newspaperman opened his eyes wide and drew two or three long breaths. 'No. Why?'

'I looked out the window too long, I suppose. The dimness got me. Difficulty in breathing is one of the first symptoms of a claustrophobic attack.'

Theremon drew another long breath. 'Well, it hasn't got me yet. Say, here's another of the fellows.'

Beenay had interposed his bulk between the light and the pair in the corner, and Sheerin squinted at him anxiously. 'Hello, Beenay.'

The astronomer shifted his weight to the other foot and smiled feebly. 'You won't mind if I sit down awhile and join in the talk. My cameras are set, and there's nothing to do till totality.' He paused and eyed the Cultist, who fifteen minutes earlier had drawn a small, skin-bound book from his sleeve and had been poring intently over it ever since. 'That rat hasn't been making trouble, has he?'

Sheerin shook his head. His shoulders were thrown back and he frowned his concentration as he forced himself to breathe regularly. He said, 'Have you had any trouble breathing, Beenay?'

Beenay sniffed the air in his turn. 'It doesn't seem stuffy to me.'

'A touch of claustrophobia,' explained Sheerin apologetically.

'Oh-h-h! It worked itself differently with me. I get the impression that my eyes are going back on me. Things seem to blur and – well, nothing is clear. And it's cold, too.'

'Oh, it's cold, all right. That's no illusion.' Theremon grimaced. 'My toes feel as if I'd been shipping them cross-country in a refrigerator car.'

'What we need', put in Sheerin, 'is to keep our minds busy with extraneous affairs. I was telling you a while ago, Theremon, why Faro's experiments with the holes in the roof came to nothing.'

'You were just beginning,' replied Theremon. He encircled a knee with both arms and nuzzled his chin against it.

'Well, as I started to say, they were misled by taking the "Book of Revelations" literally. There probably wasn't any sense in attaching any physical significance to the Stars. It might be, you know, that in the presence of total Darkness, the mind finds it absolutely necessary to create light. This illusion of light might be all the Stars there really are.'

'In other words,' interposed Theremon, 'you mean the Stars are the results of the madness and not one of the causes. Then what good will Beenay's photographs be?'

'To prove that it is an illusion, maybe; or to prove the opposite, for all I know. Then again – '

But Beenay had drawn his chair closer, and there was an expression of sudden enthusiasm on his face. 'I'm glad you two got on to this subject.' His eyes narrowed and he lifted one finger. 'I've been thinking about these Stars and I've got a really cute notion. Of course, it's strictly ocean foam, and I'm not trying to advance it seriously, but I think it's interesting. Do you want to hear it?'

He seemed half reluctant, but Sheerin leaned back and said, 'Go ahead! I'm listening.'

'Well, then, supposing there were other suns in the universe.' He broke off a little bashfully. 'I mean suns that are

so far away that they're too dim to see. It sounds as if I've been reading some of that fantastic fiction, I suppose.'

'Not necessarily. Still, isn't that possibility eliminated by the fact that, according to the Law of Gravitation, they would make themselves evident by their attractive forces?'

'Not if they were far enough off,' rejoined Beenay, 'really far off – maybe as much as four light years, or even more. We'd never be able to detect perturbations then, because they'd be too small. Say that there were a lot of suns that far off; a dozen or two, maybe.'

Theremon whistled melodiously. 'What an idea for a good Sunday supplement article. Two dozen suns in a universe eight light years across. Wow! That would shrink *our* universe into insignificance. The readers would eat it up.'

'Only an idea,' said Beenay with a grin, 'but you see the point. During eclipse, these dozen suns would become visible, because there'd be no *real* sunlight to drown them out. Since they're so far off, they'd appear small, like so many little marbles. Of course, the Cultists talk of millions of Stars, but that's probably exaggeration. There just isn't any place in the universe you could put a million suns – unless they touch each other.'

Sheerin had listened with gradually increasing interest. 'You've hit something there, Beenay. And exaggeration is just exactly what would happen. Our minds, as you probably know, can't grasp directly any number higher than five; above that there is only the concept of "many". A dozen would become a million just like that. A damn good idea!'

'And I've got another little notion,' Beenay said. 'Have you ever thought what a simple problem gravitation would be if only you had a sufficiently simple system? Supposing you had a universe in which there was a planet with only one sun. The planet would travel in a perfect ellipse and the

exact nature of the gravitational force would be so evident it could be accepted as an axiom. Astronomers on such a world would start off with gravity probably before they even invented the telescope. Naked-eye observation would be enough.'

'It's nice to think about,' admitted Sheerin, 'as a pretty abstraction – like a perfect gas or absolute zero.'

'Of course,' continued Beenay, 'there's the catch that life would be impossible on such a planet. It wouldn't get enough heat and light, and if it rotated there would be total Darkness half of each day. You couldn't expect life – which is fundamentally dependent upon light – to develop under those conditions. Besides – '

Sheerin's chair went over backward as he sprang to his feet in a rude interruption. 'Aton's brought out the lights.'

Beenay said, 'Huh,' turned to stare, and then grinned halfway around his head in open relief.

There were half a dozen foot-long, inch-thick rods cradled in Aton's arms. He glared over them at the assembled staff members.

With the air of one carrying through the most sacred item of a religious ritual, Sheerin scraped a large, clumsy match into spluttering life and passed it to Aton, who carried the flame to the upper end of one of the rods.

It hesitated there a while, playing futilely about the tip, until a sudden, crackling flare cast Aton's lined face into yellow highlights. He withdrew the match and a spontaneous cheer rattled the window.

The rod was topped by six inches of wavering flame! Methodically, the other rods were lighted, until six independent fires turned the rear of the room yellow.

The light was dim, dimmer even than the tenuous sunlight. The flames reeled crazily, giving birth to drunken, swaying shadows. The torches smoked devilishly and smelled like a bad day in the kitchen. But they emitted yellow light.

There is something to yellow light – after four hours of sombre, dimming Beta. Even Latimer had lifted his eyes from his book and stared in wonder.

But Theremon regarded the torches suspiciously. He wrinkled his nose at the rancid odour, and said, 'What are those things?'

'Wood,' said Sheerin shortly.

'Oh, no, they're not. They aren't burning. The top inch is charred and the flame just keeps shooting up out of nothing.'

'That's the beauty of it. This is a really efficient artificial-light mechanism. We made a few hundred of them, but most went to the Hideout, of course. You see' – he turned and wiped his blackened hands upon his handkerchief – 'you take the pithy core of coarse water reeds, dry them thoroughly and soak them in animal grease. Then you set fire to it and the grease burns, little by little. These torches will burn for almost half an hour without stopping. Ingenious, isn't it? It was developed by one of our own young men at Saro University.'

The air grew somehow denser. Dusk, like a palpable entity, entered the room and the dancing circle of yellow light about the torches etched itself into ever-sharper distinction against the gathering greyness beyond. There was the odour of smoke and the presence of little chuckling sounds that the torches made as they burned; the soft pad of one of the men circling the table at which he worked, on hesitant tiptoes; the occasional indrawn breath of someone trying to retain composure in a world that was retreating into the shadow.

It was Theremon who first heard the extraneous noise. It was a vague, unorganized *impression* of sound that would have gone unnoticed but for the dead silence that prevailed within the dome.

The newsman sat upright and replaced his notebook. He held his breath and listened; then, with considerable reluctance, threaded his way between the solarscope and one of Beenay's cameras and stood before the window.

Outside, Beta was a mere smouldering splinter, taking one last desperate look at Lagash. The eastern horizon, in the direction of the city, was lost in Darkness, and the road from Saro to the Observatory was a dull-red line bordered on both sides by wooded tracts, the trees of which had somehow lost individuality and merged into a continuous shadowy mass.

But it was the highway itself that held attention, for along it there surged another, and infinitely menacing, shadowy mass.

Aton cried in a cracked voice, 'The madmen from the city! They've come!'

'How long to totality?' demanded Sheerin.

'Fifteen minutes, but . . . but they'll be here in five.'

'Never mind, keep the men working. We'll hold them off. This place is built like a fortress. Aton, keep an eye on our young Cultist just for luck. Theremon, come with me.'

Sheerin was out the door, and Theremon was at his heels. The stairs stretched below them in tight, circular sweeps about the central shaft, fading into a dank and dreary greyness.

The first momentum of their rush had carried them fifty feet down, so that the dim, flickering yellow from the open door of the dome had disappeared and both up above and down below the same dusky shadow crushed in upon them.

Sheerin paused, and his pudgy hand clutched at his chest. His eyes bulged and his voice was a dry cough. 'I can't . . . breath . . . go down . . . yourself. Close all doors – '

Theremon took a few downward steps, then turned. 'Wait! Can you hold out a minute?' He was panting himself. The air passed in and out his lungs like so much molasses,

and there was a little germ of screeching panic in his mind at the thought of making his way into the mysterious Darkness below by himself.

Theremon, after all, was afraid of the dark!

'Stay here,' he said. 'I'll be back in a second.' He dashed upward two steps at a time, heart pounding – not altogether from the exertion – tumbled into the dome and snatched a torch from its holder. It was foul smelling, and the smoke smarted his eyes almost blind, but he clutched that torch as if he wanted to kiss it for joy, and its flame streamed backward as he hurtled down the stairs again.

Sheerin opened his eyes and moaned as Theremon bent over him. Theremon shook him roughly. 'All right, get a hold on yourself. We've got light.'

He held the torch at tiptoe height and, propping the tottering psychologist by an elbow, made his way downward in the middle of the protecting circle of illumination.

The offices on the ground floor still possessed what light there was, and Theremon felt the horror about him relax.

'Here,' he said brusquely, and passed the torch to Sheerin. 'You can hear *them* outside.'

And they could. Little scraps of hoarse, wordless shouts.

But Sheerin was right; the Observatory *was* built like a fortress. Erected in the last century, when the neo-Gavottian style of architecture was at its ugly height, it had been designed for stability and durability, rather than for beauty.

The windows were protected by the grille-work of inch-thick iron bars sunk deep into the concrete sills. The walls were solid masonry that an earthquake couldn't have touched, and the main door was a huge oaken slab reinforced with iron at the strategic points. Theremon shot the bolts and they slid shut with a dull clang.

At the other end of the corridor, Sheerin cursed weakly.

He pointed to the lock of the back door which had been neatly jemmied into uselessness.

'That must be how Latimer got in,' he said.

'Well, don't stand there,' cried Theremon impatiently. 'Help drag up the furniture – and keep that torch out of my eyes. The smoke's killing me.'

He slammed the heavy table against the door as he spoke, and in two minutes had built a barricade which made up for what it lacked in beauty and symmetry by the sheer inertia of its massiveness.

Somewhere, dimly, far off, they could hear the battering of naked fists upon the door; and the screams and yells from outside had a sort of half reality.

That mob had set off from Saro City with only two things in mind: the attainment of Cultist salvation by the destruction of the Observatory, and a maddening fear that all but paralysed them. There was no time to think of ground cars, or of weapons, or of leadership, or even of organization. They made for the Observatory on foot and assaulted it with bare hands.

And now that they were there, the last flash of Beta, the last ruby-red drop of flame, flickered feebly over a humanity that had left only stark, universal fear!

Theremon groaned, 'Let's get back to the dome!'

In the dome, only Yimot, at the solarscope, had kept his place. The rest were clustered about the cameras, and Beenay was giving his instructions in a hoarse, strained voice.

'Now remember, don't . . . don't try to look for good shots. Don't waste time trying to get t-two stars at a time in the scope field. One is enough. And . . . and if you feel yourself going, *get away from the camera.*'

At the door, Sheerin whispered to Theremon, 'Take me to Aton. I don't see him.'

The newsman did not answer immediately. The vague forms of the astronomers wavered and blurred, and the torches overhead had become only yellow splotches.

'It's dark,' he whimpered.

Sheerin held out his hand, 'Aton.' He stumbled forward. 'Aton!'

Theremon stepped after and seized his arm. 'Wait, I'll take you.' Somehow he made his way across the room. He closed his eyes against the Darkness and his mind against the chaos within it.

No one heard them or paid attention to them. Sheerin stumbled against the wall. 'Aton!'

The psychologist felt shaking hands touching him, then withdrawing, and a voice muttering, 'Is that you, Sheerin?'

'Aton!' He strove to breathe normally. 'Don't worry about the mob. The place will hold them off.'

Beenay's face was dimly flushed as it looked upward at Beta's last ray, and Latimer, seeing him bend over his camera, made his decision. His nails cut the flesh of his palms as he tensed himself.

He staggered crazily as he started his rush. There was nothing before him but shadows; the very floor beneath his feet lacked substance. And then someone was upon him and he went down with clutching fingers at his throat.

He doubled his knee and drove it hard into his assailant. 'Let me up or I'll kill you.'

Theremon cried out sharply and muttered through a blinding haze of pain, 'You double-crossing rat!'

The newsman seemed conscious of everything at once. He heard Beenay croak, 'I've got it. At your cameras, men!' and then there was the strange awareness that the last thread of sunlight had thinned out and snapped.

And Latimer had gone limp in his loosening grasp. There-

mon peered into the Cultist's eyes and saw the blackness of them, staring upward, mirroring the feeble yellow of the torches. He saw the bubble of froth upon Latimer's lips and heard the low animal whimper in Latimer's throat.

With the slow fascination of fear, he lifted himself on one arm and turned his eyes towards the blood-curdling blackness of the window.

Through it shone the Stars!

Not Earth's feeble thirty-six hundred Stars visible to the eye – Lagash was in the centre of a giant cluster. Thirty thousand mighty suns shone down in a soul-searing splendour that was more frighteningly cold in its awful indifference than the bitter wind that now shivered across the world. The bright walls of the universe were shattered and their awful black fragments were falling down to crush and squeeze and obliterate men.

'Light!' Theremon screamed.

Aton, somewhere, was whimpering horribly like a frightened child. 'Stars – all the Stars – we didn't know at all. We didn't know anything. We thought six stars in a universe is something the Stars didn't notice is Darkness forever and ever and ever and the walls are breaking in and we didn't know we couldn't know and anything – '

Someone clawed at the torch, and it fell and snuffed out. In that instant, the awful splendour of the Stars leaped nearer to them.

On the horizon outside the window, in the direction of Saro City, a crimson glow began growing, strengthening in brightness, that was not the glow of a sun.

The long night had come again.

The Snowball Effect

KATHERINE MACLEAN

'ALL right,' I said, 'what is sociology good for?'

Wilton Caswell, Ph.D., was head of my Sociology Department, and right then he was mad enough to chew nails. On the office wall behind him were three or four framed documents in Latin, but I didn't care at that moment if he papered the walls with his degrees. I had been appointed dean and president to see to it that the university made money. I had a job to do, and I meant to do it.

He bit off each word with great restraint: 'Sociology is the study of social institutions, Mr Halloway.'

I tried to make him understand my position. 'Look, it's the big-money men who are supposed to be contributing to the support of this college. To them, sociology sounds like socialism – nothing can sound worse than that – and an institution is where they put Aunt Maggy when she began collecting Wheaties in a stamp album. We can't appeal to them that way. Come on now.' I smiled condescendingly, knowing it would irritate him. 'What are you doing that's worth anything?'

He glared at me, his white hair bristling and his nostrils dilated like a war horse about to whinny. I can say one thing for them – these scientists and professors always keep themselves well under control. He had a book in his hand and I was expecting him to throw it, but he spoke instead:

'This department's analysis of institutional accretion, by the use of open system mathematics, has been recognized as an outstanding and valuable contribution to – '

The words were impressive, whatever they meant, but this

still didn't sound like anything that would pull in money. I interrupted, 'Valuable in what way?'

He sat down on the edge of his desk thoughtfully, apparently recovering from the shock of being asked to produce something solid for his position, and ran his eyes over the titles of the books that lined his office walls.

'Well, sociology has been valuable to business in initiating worker efficiency and group motivation studies, which they now use in management decisions. And, of course, since the depression, Washington has been using sociological studies of employment, labour, and standards of living as a basis for its general policies of – '

I stopped him with both hands raised. 'Please, Professor Caswell! That would hardly be a recommendation. Washington, the New Deal and the present Administration are somewhat touchy subjects to the men I have to deal with. They consider its value debatable, if you know what I mean. If they got the idea that sociology professors are giving advice and guidance – No, we have to stick to brass tacks and leave Washington out of this. What, specifically, has the work of this specific department done that would make it as worthy to receive money as – say, a heart disease research fund?'

He began to tap the corner of his book absently on the desk, watching me. 'Fundamental research doesn't show immediate effects, Mr Halloway, but its value is recognized.'

I smiled and took out my pipe. 'All right, tell me about it. Maybe I'll recognize its value.'

Prof. Caswell smiled back tightly. He knew his department was at stake. The other departments were popular with donors and pulled in gift money by scholarships and fellowships, and supported their professors and graduate students by research contracts with the government and industry.

Caswell had to show a way to make his own department popular – or else.

He laid down his book and ran a hand over his ruffled hair. 'Institutions – organizations, that is – ' his voice became more resonant; like most professors, when he had to explain something he instinctively slipped into his platform lecture mannerisms, and began to deliver an essay – 'have certain tendencies built into the way they happen to have been organized, which cause them to expand or contract without reference to the needs they were founded to serve.'

He was becoming flushed with the pleasure of explaining his subject. 'All through the ages, it has been a matter of wonder and dismay to men that a simple organization – such as a church to worship in, or a delegation of weapons to a warrior class merely for defence against an outside enemy – will either grow insensately and extend its control until it is a tyranny over their whole lives, or, like other organizations set up to serve a vital need, will tend to repeatedly dwindle and vanish, and have to be painfully rebuilt.

'The reason can be traced to little quirks in the way they were organized, a matter of positive and negative power feedbacks. Such simple questions as, "Is there a way a holder of authority in this organization can use the power available to him to increase his power?" provide the key. But it still could not be handled until the complex questions of interacting motives and long-range accumulations of minor effects could somehow be simplified and formulated. In working on the problem, I found that the mathematics of open system, as introduced to biology by Ludwig von Bertalanffy and George Kreezer, could be used as a base that would enable me to develop a specifically social mathematics, expressing the human factors of intermeshing authority and motives in simple formulas.

'By these formulations, it is possible to determine automatically the amount of growth and period of life of any organization. The UN, to choose an unfortunate example, is a shrinker type organization. Its monetary support is not in the hands of those who personally benefit by its governmental activities, but, instead, in the hands of those who would personally lose by any extension and encroachment of its authority on their own. Yet by the use of formula analysis–'

'That's theory,' I said. 'How about proof?'

'My equations are already being used in the study of limited-size Federal corporations. Washington – '

I held up my palm again. 'Please, not that nasty word again. I mean, where else has it been put into operation? Just a simple demonstration, something to show that it works, that's all.'

He looked away from me thoughtfully, picked up the book and began to tap it on the desk again. It had some unreadable title and his name on it in gold letters. I got the distinct impression again that he was repressing an urge to hit me with it.

He spoke quietly. 'All right. I'll give you a demonstration. Are you willing to wait six months?'

'Certainly, if you can show me something at the end of that time.'

Reminded of time, I glanced at my watch and stood up.

'Could we discuss this over lunch?' he asked.

'I wouldn't mind hearing more, but I'm having lunch with some executors of a millionaire's will. They have to be convinced that by, "furtherance of research into human ills," he meant that the money should go to research fellowships for postgraduate biologists at the university, rather than to a medical foundation.'

'I see you have your problems, too,' Caswell said, conceding me nothing. He extended his hand with a chilly smile.

'Well, good afternoon, Mr Halloway. I'm glad we had this talk.'

I shook hands and left him standing there, sure of his place in the progress of science and the respect of his colleagues, yet seething inside because I, the president and dean, had boorishly demanded that he produce something tangible.

My job isn't easy. For a crumb of favourable publicity and respect in the newspapers and an annual ceremony in a silly costume, I spend the rest of the year going hat in hand, asking politely for money at everyone's door, like a well-dressed panhandler, and trying to manage the university on the dribble I get. As far as I was concerned, a department had to support itself or be cut down to what student tuition pays for, which is a handful of overcrowded courses taught by an assistant lecturer. Caswell had to make it work or get out.

But the more I thought about it, the more I wanted to hear what he was going to do for a demonstration.

At lunch, three days later, while we were waiting for our order, he opened a small notebook. 'Ever hear of feedback effects?'

'Not enough to have it clear.'

'You know the snowball effect, though.'

'Sure, start a snowball rolling downhill and it grows.'

'Well, now – ' He wrote a short line of symbols on a blank page and turned the notebook around for me to inspect it. 'Here's the formula for the snowball process. It's the basic general growth formula – covers everything.'

It was a row of little symbols arranged like an algebra equation. One was a concentric spiral going up, like a cross-section of a snowball rolling in snow. That was a growth sign.

I hadn't expected to understand the equation, but it was

almost as clear as a sentence. I was impressed and slightly intimidated by it. He had already explained enough so that I knew that, if he was right, here was the growth of the Catholic Church and the Roman Empire, the conquests of Alexander and the spread of the smoking habit and the change and rigidity of the unwritten law of styles.

'Is it really as simple as that?' I asked.

'You notice,' he said, 'that when it becomes too heavy for the cohesion strength of snow, it breaks apart. Now in human terms – '

The chops and mashed potatoes and peas arrived.

'Go on,' I urged.

He was deep in the symbology of human motives and the equations of human behaviour in groups. After running through a few different types of grower and shrinker type organizations, we came back to the snowball, and decided to run the test by making something grow.

'You add the motives,' he said, 'and the equation will translate them into organization.'

'How about a good selfish reason for the ins to drag others into the group – some sort of bounty on new members, a cut of their membership fee?' I suggested uncertainly, feeling slightly foolish. 'And maybe a reason why the members would lose if any of them resigned, and some indirect way they could use to force each other to stay in.'

'The first is the chain letter principle,' he nodded. 'I've got that. The other . . .' He put the symbols through some mathematical manipulation so that a special grouping appeared in the middle of the equation. 'That's it.'

Since I seemed to have the right idea, I suggested some more, and he added some, and juggled them around in different patterns. We threw out a few that would have made the organization too complicated, and finally worked out an idyllically simple and deadly little organization set-up

where joining had all the temptation of buying a sweepstakes ticket, going in deeper was as easy as hanging around a race track, and getting out was like trying to pull free from a Malayan thumb trap. We put our heads closer together and talked lower, picking the best place for the demonstration.

'Abington?'

'How about Watashaw? I have some student sociological surveys of it already. We can pick a suitable group from that.'

'This demonstration has got to be convincing. We'd better pick a little group that no one in his right mind would expect to grow.'

'There should be a suitable club – '

'Ladies,' said the skinny female chairman of the Watashaw Sewing Circle. 'Today we have guests.' She signalled for us to rise, and we stood up, bowing to polite applause and smiles. 'Professor Caswell, and Professor Smith.' (My alias.) 'They are making a survey of the methods and duties of the clubs of Watashaw.'

We sat down to another ripple of applause and slightly wider smiles, and then the meeting of the Watashaw Sewing Circle began. In five minutes I began to feel sleepy.

There were only about thirty people there, and it was a small room, not the halls of Congress, but they discussed their business of collecting and repairing second-hand clothing for charity with the same endless boring parliamentary formality.

I pointed out to Caswell the member I thought would be the natural leader, a tall, well-built woman in a green suit, with conscious gestures and a resonant, penetrating voice, and then went into a half doze while Caswell stayed awake beside me and wrote in his notebook. After a while the

resonant voice roused me to attention for a moment. It was the tall woman holding the floor over some collective dereliction of the club. She was being scathing.

I nudged Caswell and murmured, 'Did you fix it so that a shover has a better chance of getting into office than a non-shover?'

'I think there's a way they could find for it,' Caswell whispered back, and went to work on his equation again. 'Yes, several ways to bias the elections.'

'Good. Point them out tactfully to the one you select. Not as if she'd use such methods, but just as an example of the reason why only *she* can be trusted with initiating the change. Just mention all the personal advantages an unscrupulous person could have.'

He nodded, keeping a straight and sober face as if we were exchanging admiring remarks about the techniques of clothes repairing, instead of conspiring.

After the meeting, Caswell drew the tall woman in the green suit aside and spoke to her confidentially, showing her the diagram of organization we had drawn up. I saw the responsive glitter in the woman's eyes and knew she was hooked.

We left the diagram of organization and our typed copy of the new by-laws with her and went off soberly, as befitted two social science experimenters. We didn't start laughing until our car passed the town limits and began the climb for University Heights.

If Caswell's equations meant anything at all, we had given that sewing circle more growth drives than the Roman Empire.

Four months later I had time out from a very busy schedule to wonder how the test was coming along. Passing Caswell's office, I put my head in. He looked up from a student research paper he was correcting.

'Caswell, about that sewing club business – I'm beginning to feel the suspense. Could I get an advance report on how it's coming?'

'I'm not following it. We're supposed to let it run the full six months.'

'But I'm curious. Could I get in touch with that woman – what's her name?'

'Searles. Mrs George Searles.'

'Would that change the results?'

'Not in the slightest. If you want to graph the membership rise, it should be going up in a log curve, probably doubling every so often.'

I grinned. 'If it's not rising, you're fired.'

He grinned back. 'If it's not rising, you won't have to fire me – I'll burn my books and shoot myself.'

I returned to my office and put in a call to Watashaw.

While I was waiting for the phone to be answered, I took a piece of graph paper and ruled it off into six sections, one for each month. After the phone had rung in the distance for a long time, a servant answered with a bored drawl:

'Mrs Searles' residence.'

I picked up a red gummed star and licked it.

'Mrs Searles, please.'

'She's not in just now. Could I take a message?'

I placed the star at the thirty line in the beginning of the first section. Thirty members they'd started with.

'No, thanks. Could you tell me when she'll be back?'

'Not until dinner. She's at the meetin'.'

'The sewing club?' I asked.

'No, *sir*, not that thing. There isn't any sewing club any more, not for a long time. She's at the Civic Welfare meeting.'

Somehow I hadn't expected anything like that.

'Thank you,' I said and hung up, and after a moment

noticed I was holding a box of red gummed stars in my hand. I closed it and put it down on top of the graph of membership in the sewing circle. No more members . . .

Poor Caswell. The bet between us was ironclad. He wouldn't let me back down on it even if I wanted to. He'd probably quit before I put through the first slow move to fire him. His professional pride would be shattered, sunk without a trace. I remembered what he said about shooting himself. It had seemed funny to both of us at the time, but . . . What a mess that would make for the university.

I had to talk to Mrs Searles. Perhaps there was some outside reason why the club had disbanded. Perhaps it had not just died.

I called back. 'This is Professor Smith,' I said, giving the alias I had used before. 'I called a few minutes ago. When did you say Mrs Searles will return?'

'About six-thirty or seven o'clock.'

Five hours to wait.

And what if Caswell asked me what I had found out in the meantime? I didn't want to tell him anything until I had talked it over with that woman Searles first.

'Where is this Civic Welfare meeting?'

She told me.

Five minutes later, I was in my car, heading for Watashaw, driving considerably faster than usual and keeping a careful watch for highway patrol cars as the speedometer climbed.

The town meeting hall and theatre was a big place, probably with lots of small rooms for different clubs. I went in through the centre door and found myself in the huge central hall where some sort of rally was being held. A political-type rally – you know, cheers and chants, with bunting already down on the floor, people holding banners, and

plenty of enthusiasm and excitement in the air. Someone was making a speech up on the platform. Most of the people there were women.

I wondered how the Civic Welfare League could dare hold its meeting at the same time as a political rally that could pull its members away. The group with Mrs Searles was probably holding a shrunken and almost memberless meeting somewhere in an upper room.

There probably was a side door that would lead upstairs.

While I glanced around, a pretty girl usher put a printed bulletin in my hand, whispering, 'Here's one of the new copies.' As I attempted to hand it back, she retreated. 'Oh, you can keep it. It's the new one. Everyone's supposed to have it. We've just printed up six thousand copies to make sure there'll be enough to last.'

The tall woman on the platform had been making a driving, forceful speech about some plans for rebuilding Watashaw's slum section. It began to penetrate my mind dimly as I glanced down at the bulletin in my hands.

'Civic Welfare League of Watashaw. The United Organization of Church and Secular Charities.' That's what it said. Below began the rules of membership.

I looked up. The speaker, with a clear, determined voice and conscious, forceful gestures, had entered the homestretch of her speech, an appeal to the civic pride of all citizens of Watashaw.

'With a bright and glorious future – potentially without poor and without uncared-for ill – potentially with no ugliness, no vistas which are not beautiful – the best people in the best-planned town in the country – jewel of the United States.'

She paused and then leaned forward intensely, striking her clenched hand on the speaker's stand with each word for emphasis.

'All we need is more members. Now, get out there and recruit!'

I finally recognized Mrs Searles, as an answering sudden blast of sound half deafened me. The crowd was chanting at the top of its lungs: 'Recruit! Recruit!'

Mrs Searles stood still at the speaker's table and behind her, seated in a row of chairs, was a group that was probably the board of directors. It was mostly women, and the women began to look vaguely familiar, as if they could be members of the sewing circle.

I put my lips close to the ear of the pretty usher while I turned over the stiff printed bulletin on a hunch. 'How long has the League been organized?' On the back of the bulletin was a constitution.

She was cheering with the crowd, her eyes sparkling. 'I don't know,' she answered between cheers. 'I only joined two days ago. Isn't it wonderful?'

I went into the quiet outer air and got into my car with my skin prickling. Even as I drove away, I could hear them. They were singing some kind of organization song with the tune of 'Marching through Georgia.'

Even at the single glance I had given it, the constitution looked exactly like the one we had given the Watashaw Sewing Circle.

All I told Caswell when I got back was that the sewing circle had changed its name and the membership seemed to be rising.

Next day, after calling Mrs Searles, I placed some red stars on my graph for the first three months. They made a nice curve, rising more steeply as it reached the fourth month. They had picked up their first increase in membership simply by amalgamating with all the other types of charity organizations in Watashaw, changing the club

name with each fusion, but keeping the same constitution – the constitution with the bright promise of advantages as long as there were always new members being brought in.

By the fifth month, the League had added a mutual baby-sitting service and had induced the local school board to add a nursery school to the town service, so as to free more women for League activity. But charity must have been completely organized by then, and expansion had to be in other directions.

Some real estate agents evidently had been drawn into the whirlpool early, along with their ideas. The slum improvement plans began to blossom and take on a tinge of real estate planning later in the month.

The first day of the sixth month, a big two-page spread appeared in the local paper of a mass meeting which had approved a full-fledged scheme for slum clearance of Watashaw's shack-town section, plus plans for rehousing, civic building, and re-zoning. And good prospects for attracting some new industries to the town, industries which had already been contacted and seemed interested by the privileges offered.

And with all this, an arrangement for securing and distributing to the club members *alone* most of the profit that would come to the town in the form of a rise in the price of building sites and a boom in the building industry. The profit distributing arrangement was the same one that had been built into the organization plan for the distribution of the small profits of membership fees and honorary promotions. It was becoming an openly profitable business. Membership was rising more rapidly now.

By the second week of the sixth month, news appeared in the local paper that the club had filed an application to incorporate itself as the Watashaw Mutual Trade and Civic

Development Corporation, and all the local real estate promoters had finished joining en masse. The Mutual Trade part sounded to me as if the Chamber of Commerce was on the point of being pulled in with them, ideas, ambitions, and all.

I chuckled while reading the next page of the paper, on which a local politician was reported as having addressed the club with long flowery oration on their enterprise, charity, and civic spirit. He had been made an honorary member. If he allowed himself to be made a *full member* with its contractual obligations and its lures, if the politicians went into this, too . . .

I laughed, filing the newspaper with the other documents on the Watashaw test. These proofs would fascinate any businessman with the sense to see where his bread was buttered. A businessman is constantly dealing with organizations, including his own, and finding them either inert, cantankerous, or both. Caswell's formula could be a handle to grasp them with. Gratitude alone would bring money into the university in car-load lots.

The end of the sixth month came. The test was over and the end reports were spectacular. Caswell's formulas were proven to the hilt.

After reading the last newspaper reports, I called him up.

'Perfect, Wilt, *perfect*! I can use this Watashaw thing to get you so many fellowships and scholarships and grants for your department that you'll think it's snowing money!'

He answered somewhat uninterestedly, 'I've been busy working with students on their research papers and marking tests – not following the Watashaw business at all, I'm afraid. You say the demonstration went well and you're satisfied?'

He was definitely putting on a chill. We were friends now,

but obviously he was still peeved whenever he was reminded that I had doubted that his theory could work. And he was using its success to rub my nose in the realization that I had been wrong. A man with a string of degrees after his name is just as human as anyone else. I had needled him pretty hard that first time.

'I'm satisfied,' I acknowledged. 'I was wrong. The formulas work beautifully. Come over and see my file of documents on it if you want a boost for your ego. Now let's see the formula for stopping it.'

He sounded cheerful again. 'I didn't complicate that organization with negatives. I wanted it to *grow*. It falls apart naturally when it stops growing for more than two months. It's like the great stock boom before an economic crash. Everyone in it is prosperous as long as the prices just keep going up and new buyers come into the market, but they all know what would happen if it stopped growing. You remember, we built in as one of the incentives that the members know they are going to lose if membership stops growing. Why, if I tried to stop it now, they'd cut my throat.'

I remembered the drive and frenzy of the crowd in the one early meeting I had seen. They probably would.

'No,' he continued. 'We'll just let it play out to the end of its tether and die of old age.'

'When will that be?'

'It can't grow past the female population of the town. There are only so many women in Watashaw, and some of them don't like sewing.'

The graph on the desk before me began to look sinister. Surely Caswell must have made some provision for –

'You underestimate their ingenuity,' I said into the phone. 'Since they wanted to expand, they didn't stick to sewing. They went from general charity to social welfare schemes

to something that's pretty close to an incorporated government. The name is now the Watashaw Mutual Trade and Civic Development Corporation, and they're filing an application to change it to Civic Property Pool and Social Dividend, membership contractual, open to all. That social dividend sounds like a Technocrat climbed on the band wagon, eh?'

While I spoke, I carefully added another red star to the curve above the thousand member level, checking with the newspaper that still lay open on my desk. The curve was definitely some sort of log curve now, growing more rapidly with each increase.

'Leaving out practical limitations for a moment, where does the formula say it will stop?' I asked.

'When you run out of people to join it. But after all, there are only so many people in Watashaw. It's a pretty small town.'

'They've opened a branch office in New York,' I said carefully into the phone, a few weeks later.

With my pencil, very carefully, I extended the membership curve from where it was then.

After the next doubling, the curve went almost straight up and off the page.

Allowing for a lag of contagion from one nation to another, depending on how much their citizens intermingled, I'd give the rest of the world about twelve years.

There was a long silence while Caswell probably drew the same graph in his own mind. Then he laughed weakly. 'Well, you asked me for a demonstration.'

That was as good an answer as any. We got together and had lunch in a bar, if you can call it lunch. The movement we started will expand by hook or by crook, by seduction or by bribery or by propaganda or by conquest, but it will

expand. And maybe a total world government will be a fine thing – until it hits the end of its rope in twelve years or so.

What happens then, I don't know.

But I don't want anyone to pin that on me. From now on, if anyone asks me, I've never heard of Watashaw.

The End of Summer

ALGIS BUDRYS

AMERICAPORT hadn't changed since he'd last seen it, two hundred years before. It was set as far away from any other civilized area as possible, so that no plane, no matter how badly strayed, could possibly miss its landing and crash into a dwelling. Except for the straight-edge swathe of the highway leading south, it was completely isolated if you forgot the almost deserted tube station. Its edge was dotted by hangars and a few offices, but the terminal building itself was small, and severely functional. Massive with bare concrete, aseptic with steel and aluminium, it was a grey, bleak place in the wilderness.

Kester Fay was so glad to see it that he jumped impatiently from the big jet's passenger lift. He knew he was getting curious looks from the ground crew clustered around the stainless-steel ship, but he would have been stared at in any case, and he had seen the sports car parked and waiting for him beside the Administration Building. He hurried across the field at a pace that attracted still more attention, eager to get his clearance and be off.

He swung his memory vault impatiently by the chain from his wristlet while the Landing Clearance officer checked his passport, but the man was obviously too glad to see someone outside the small circle of airlines personnel. He stalled interminably, and while Fay had no doubt that his life out here bored him to tears, it was becoming harder and harder to submit patiently.

'Christopher Jordan Fay,' the man read off, searching for

a fresh conversational opening. 'Well, Mr Fay, we haven't seen you here since '753. Enjoy your stay?'

'Yes,' he answered as shortly as possible. Enjoyed it? Well, yes, he supposed he had, but it was hard to feel that way since he'd played his old American memories at augmented volume all through the flight across the Atlantic. Lord, but he was tired of Europe at this moment; weary of winding grassy lanes that meandered with classic patience among brooks and along creeks, under old stately trees! 'It's good to be back where a man can stretch his legs, though.'

The official chuckled politely, stamping forms. 'I'll bet it is at that. Planning to stay long?'

Forever, if I can help it, Fay thought first. But then he smiled ruefully. His life had already been an overdone demonstration that forever was a long time. 'For a while, at any rate,' he answered, his impatience growing as he thought of the car again. He shuffled his feet on the case-hardened flooring.

'Shall I arrange for transportation to New York?'

Fay shook his head. 'Not for me. But the man who drove my car up might be a customer.'

The official's eyebrows rose, and Fay suddenly remembered that America, with its more liberal social attitudes, might tolerate him more than Europe had, but that there were still plenty of conservatives sheltered under the same banner.

As a matter of fact, he should have realized that the official was a Homebody; a Civil Service man, no doubt. Even with a dozen safe places to put it down within easy reach, he still kept his memory vault chained to his wrist. Fay's own eyebrows lifted, and amusement glittered in his eyes.

'Driving down?' The official looked at Fay with a mixture of respect, envy, and disapproval.

'It's only fifteen hundred miles,' Fay said with careful

nonchalance. Actually, he felt quite sure that he was going to throttle the man if he wasn't let out of here and behind the wheel soon. But it would never do to be anything but bored in front of a Homebody. 'I expect to make it in about three days,' he added almost yawning.

'Yes, sir,' the man said, instantly wrapping himself in a mantle of aloof politeness, but muttering 'Dilly!' almost audibly.

He'd hit home with that one, all right! Probably, the man had never set foot in an automobile. Certainly, he considered it a barefaced lie that anyone would undertake to average fifty m.p.h. during a driving day. Safe cushiony pneumocars were his speed – and he an airlines employee!

Fay caught himself hastily. Everybody had a right to live any way he wanted to, he reminded himself.

But he could not restrain an effervescent grin at the man's sudden injured shift to aloofness.

'All right, sir,' the official said crisply, returning Fay's passport. 'Here you are. No baggage, of course?'

'Of course,' Fay said agreeably, and if that had been intended as a slur at people who travelled light and fast, it had fallen exceedingly flat. He waved his hand cheerfully as he turned away, while the official stared at him sourly. 'I'll be seeing you again, I imagine.'

'I'm afraid not, sir,' the man answered with a trace of malevolence. 'United States Lines is shutting down passenger service the first of next dekayear.'

Momentarily nonplussed, Fay hesitated. 'Oh? Too bad. No point to continuing, though, is there?'

'No, sir. I believe you were our first in a hectoyear and a half.' Quite obviously, he considered that as much of a mark of Cain as necessary.

'Well . . . must be dull out here, eh?'

He cocked a satiric eye at the man and was gone, chuckling

at that telling blow while the massive exit door swung ponderously shut behind him.

The car's driver was obviously a Worker who'd taken on the job because he needed money for some obscure, Worker-ish purpose. Fay settled the business in the shortest possible time, counting out hundred-dollar bills with a rapid shuffle. He threw in another for good measure, and waved the man aside, punching the starter vibrantly. He was back, he was home! He inhaled deeply, breathing the untrammelled air.

Curled around mountains and trailed gently through valleys, the road down through New York State was a joy. Fay drove it with a light, appreciative smile, guiding his car exuberantly, his muscles locked into communion with the automobile's grace and power as his body responded to each banked turn, each surge of acceleration below the downward crest of a hill. There was nothing like this in Europe – nothing. Over there, they left no room for his kind among their stately people.

He had almost forgotten what it was like to sit low behind the windscreen of a two-seater and listen to the dancing explosions of the unmuffled engine. It was good to be back, here on this open, magnificent road, with nothing before or behind but satin-smooth ferro-concrete, and heaped green mountains to either side.

He was alone on the road, but thought nothing of it. There were very few who lived his kind of life. Now that his first impatience had passed, he was sorry he hadn't been able to talk to the jet's pilot. But that, of course, had been out of the question. Even with all the safety interlocks, there was the chance that one moment's attention lost would allow an accident to happen.

So, Fay had spent the trip playing his memory on the

plane's excellent equipment, alone in the comfortable but small compartment forward of the ship's big cargo cabin.

He shrugged as he nudged the car around a curve in the valley. It couldn't be helped. It was a lonely life, and that was all there was to it. He wished there were more people who understood that it was the *only* life – the only solution to the problem which had fragmented them into so many social patterns. But there were not. And, he supposed, they were all equally lonely. The Homebodies, the Workers, the Students, and the Teachers. Even, he conceded, the Hoppers. He'd Hopped once himself, as an experiment. It had been a hollow, hysteric experience.

The road straightened, and, some distance ahead, he saw the white surface change to the dark macadam of an urban district. He slowed in response, considering the advisability of switching his safeties in, and decided it was unnecessary as yet. He disliked being no more than a pea in a safetied car's basket, powerless to do anything but sit with his hands and feet off the controls. No; for another moment, he wanted to be free to turn the car nearer the shoulder and drive through the shade of the thick shrubbery and overhanging trees. He breathed deeply of the faint fragrance in the air and once more told himself that *this* was the only way to live, the only way to find some measure of vitality. A Dilly? Only in the jealous vocabularies of the Homebodies, so long tied to their hutches and routines that the scope of mind and emotion had narrowed to fit their microcosm.

Then, without warning, still well on the white surface of open road, the brown shadow darted out of the bushes and flung itself at his wheels, barking shrilly.

He tried to snap the car out of the way, his face suddenly white, but the dog moved unpredictably, its abrupt yell of pain louder than the scream of Fay's brakes. He felt the soft

bump, and then his foot jerked away from the clutch and the car stalled convulsively. Even with his engine dead and the car still, he heard no further sound from the dog.

Then he saw the Homebody boy running towards him up the road, and the expression of his face changed from shocked unpleasantness to remorseful regret. He sighed and climbed out of the car clumsily, trying to think of something to say.

The boy came running up and stopped beside the car, looking up the road with his face drawn into tearful anger.

'You *ran* over Brownie!'

Fay stared helplessly down at the boy. 'I'm sorry, son,' he said as gently as he could. He could think of nothing really meaningful to tell him. It was a hopeless situation. 'I . . . I shouldn't have been driving so fast.'

The boy ran to the huddled bundle at the shoulder of the road and picked it up in his arms, sobbing. Fay followed him, thinking that ten thousand years of experience were not enough – that a hundred centuries of learning and acquiring superficial maturity were still insufficient to shield the emotions trapped in a young boy's body, at the mercy of his glandular system, under a shock like this.

'Couldn't you see him?' the boy pleaded.

Fay shook his head numbly. 'He came out of the shrubs – '

'You shouldn't have been driving so fast. You should have – '

'I know.' He looked uselessly back up the road, the trees bright green in the sunshine, the sky blue.

'I'm sorry,' he told the boy again. He searched desperately for something, some way, to make recompense. 'I wish it hadn't happened.' He thought of something, finally. 'I . . . I know it wouldn't be the same thing, but I've got a dog of

my own – a basset hound. He's coming over from Europe on a cargo ship. When he gets here, would you like to have him?'

'Your *own* dog?' For a moment the boy's eyes cleared, but then he shook his head hopelessly. 'It wouldn't work out,' he said simply, and then, as though conscious of guilt at even considering that any other dog could replace his, tightened his arms on the lifeless bundle.

No, it hadn't been such a good idea, Fay realized. If he weren't so snarled up in remorse and confusion, he'd have seen that. Ugly had been his dog and couldn't be separated from him, or he from Ugly. He realized even more strongly just precisely what he had done to the boy.

'Something wrong? Oh – ' The Homebody man who had come up the road stopped beside them, his face turning grave. Fay looked at him in relief.

'I had my automatics off,' he explained to the man. 'I wouldn't have, if I'd known there was a house around here, but I didn't see anything. I'm terribly sorry about the ... about Brownie.'

The man looked again at the dog in the boy's arms, and winced. Then he sighed and shrugged helplessly. 'Guess it was bound to happen sometime. Should have been on a leash. There's still a law of averages.'

Fay's fist clenched behind his back, out of sight. The well-worn words bit deep at the very foundation of his vitality, and his mind bridled, but in another moment the spasm of reflexive fear was gone, and he was glad he'd had this harmless outlet for his emotions. Besides, the man was right, and at this moment Fay was forced to be honest enough with himself to admit it. There was still a law of averages, whether Fay and his Dilly kind liked it or not.

'Go on back to the house, Son,' the man said with another sigh. 'There's nothing we can do for Brownie. We'll bury

him later. Right now you ought to wash up. I'll be along in a minute.'

It was the way he said it – the fatalistic acceptance that no matter what the honest folk did, some blundering, heedless dilettante was going to thwart them – that scored Fay's emotions.

The boy nodded wordlessly, still crying, and began to walk away without looking at Fay again.

But Fay couldn't let him go. Like a man who picks at a splinter, he could not let this pass so simply. 'Wait!' he said urgently.

The boy stopped and looked at him woodenly.

'I ... I know there's nothing – I mean,' Fay stumbled, 'Brownie was your dog, and there can't be another one like him. But I do a lot of travelling – ' He stopped again, flushing at the Homebody man's knowing look, then pushed on regardless. 'I see a lot of people,' he went on. 'I'll try to find you a dog that hasn't ever belonged to anybody. When I do, I'll bring him to you. I promise.'

The boy's lips twitched, suddenly revealing what ten thousand years had taught him. 'Thanks, mister,' he said half-scornfully, and walked away, cradling his dog.

He hadn't believed him, of course. Fay suddenly realized that no one ever believed a Dilly, whether he was telling the truth or not. He realized, too, that he had done the best he could, and nevertheless failed. He looked regretfully after the boy.

'You didn't have to do that,' the man said softly, and Fay noted that some of his reserve and half-contemptuous politeness were gone. 'I don't know whether to believe you or not, you didn't have to do that. Anyway, I'll edit the dog out of his memories tonight. My wife and I'll clean the place up, and he won't notice anything.' He paused, reflecting, his eyes

dark. 'Guess Madge and I'll cut it out of our own minitapes, too.'

Fay clenched his teeth in sudden annoyance. Nobody ever believed a Dilly. 'No,' he said. 'I wish you wouldn't do that. I meant what I said.' He shook his head again. 'I don't like editing. There's always a slip somewhere, and then you know you've got a hole in your memory, but you can never remember what it was.'

The man looked at him curiously. 'Funny thing for one of you people to say. I always heard you went for editing in a big way.'

Fay kept his face from showing his thoughts. There it was again – that basic lack of understanding and a complete unwillingness to check second-hand tales. The very essence of his kind of life was that no memory, no experience, should not be lived and preserved. Besides, he'd always heard that it was the Homebodies who had to edit whole hectoyears to keep from going mad with boredom.

'No,' he contented himself with saying. 'You're confusing us with the Hoppers. *They'll* try anything.'

The man curled his lip at the mention, and Fay reflected that the introduction of a common outsider seemed helpful in circumstances like this.

'Well ... maybe you're right,' the man said, still not completely trustful, but willing to take the chance. He gave Fay his name, Arnold Riker, and his address. Fay put the slip of paper carefully in his memory vault.

'Anytime I lose that, I'll have lost my memory, too,' he commented.

The man grinned wryly. 'More likely, you'll remember to forget it tonight,' he said, some of his distrust returning at the sight of the spooled tapes.

Fay took that without protest. He supposed Riker had a right to feel that way. 'Can I drive you down to your house?'

The man flicked an expressive glance along the car's length and shook his head. 'Thanks. I'll walk. There's still a law of averages.'

And you can take that phrase and carve it on Humanity's headstone, Fay thought bitterly, but did not reply.

He climbed into the car, flicked on the automatics, and froze, completely immobile from sharply ingrained habit that was the only way to avoid the careless move that just might open the safety switch. He did not even turn his head to look at the man he left behind as the car started itself slowly away, nor did he catch more than a passing glimpse of the house where the boy and his dog had lived together for ten kiloyears.

We guard our immortality so carefully, he thought. *So very, very carefully. But there's still a law of averages.*

2

Perversely, he drove more rapidly than normal for the rest of the trip. Perhaps he was trying to reaffirm his vitality. Perhaps he was running away. Perhaps he was trying to cut down the elapsed time between towns, where his automatics threaded him though the light pedestrian traffic and sent him farther down the road, with each new danger spot safely behind him. At any rate, he arrived at his Manhattan apartment while it was still daylight, stepping off the continuous-impulse elevator with his eyes discontented.

The apartment, of course, was just as he had left it two hectoyears ago. The semi-robots had kept it sealed and germicidal until the arrival of his return message yesterday.

He could imagine the activity that had followed, as books and music tapes were broken out of their helium-flooded vaults, rugs and furnishings were stripped of their cocoons, aerated, and put in place. From somewhere, new plants had come and been set in the old containers, and fresh liquor put in the cabinet. There would be food in the kitchen,

clothes in the wardrobes – the latest styles, of course, purchased with credits against the left-behind apparel of two hectoyears before – and there were the same, old, familiar paintings on the walls. Really old, not just By-Product stuff.

He smiled warmly as he looked around him, enjoying the swell of emotion at the apartment's comfortable familiarity. He smiled once more, briefly, at the thought that he must some day devise a means of staying in a sealed apartment – wearing something like a fishing lung, perhaps – and watch the semi-robots at their refurbishing process. It must be a fascinating spectacle.

But his glance had fallen on the memory vault which he had unchained and put on a coffee table. It faced him with the ageless, silent injunction painted on each of its faces: PLAY ME, and underneath this the block of smaller lettering that he, like everybody else, knew by heart:

If your surroundings seem unfamiliar, or you have any other reason to suspect that your environment and situation are not usual, request immediate assistance from any other individual. He is obligated by strict law to direct you to the nearest free public playback booth, where you will find further instructions. Do not be alarmed, and follow these directions without anxiety, even if they seem strange to you. In extreme situations, stand still and do not move. Hold this box in front of you with both hands. This is a universally recognized signal of distress. Do not let anyone take this box away from you, no matter what the excuse offered.

He wondered momentarily what had made him notice it; he knew it so well that the pattern of type had long ago become no more than a half-seen design with a recognition value so high that it had lost all verbal significance.

Was it some sort of subconscious warning? He checked his memory hastily, but relaxed when he found none of the telltale vagueness of detail that meant it was time to let

everything else wait and get to a playback as fast as possible. He had refreshed his memory early this morning, before starting the last leg of his trip, and it seemed to be good for several more hours, at least.

What was it, then?

He frowned and went to the liquor cabinet, wondering if some train of thought had been triggered off by the accident and was trying to call attention to itself. And when he dropped into an easy-chair a few minutes later, a drink in his hand and his eyes still brooding over the vault's legend, he realized that his second guess had been the right one. As usual, one level of his mind had been busy digesting while the surface churned in seeming confusion.

He smiled ruefully. Maybe he wasn't quite as much of a Dilly as he looked and would have liked to believe. Still, a man couldn't live ten thousand years and not put a few things together in his head. He took a sip of his drink and stared out over the city in the gathering twilight. Somewhere in the graceful furniture behind him, a photo-electric relay clicked, and his high-fidelity set began to play the Karinius *Missa*. The apartment had not forgotten his moods.

No, he thought, the machines never forgot. Only men forgot, and depended on machines to help them remember. He stared at the vault, and a familiar sophistry occurred to him. 'Well,' he asked the box labelled PLAY ME, 'which *is* my brain – you or the grey lump in my head?'

The answer depended on his moods, and on his various audiences. Tonight, alone, in an uncertain mood, he had no answer.

He took another drink and sat back, frowning.

At best, he'd offered the boy a shoddy substitute. Even presuming that the passage of ten kiloyears had somehow

still left room for a dog without a master, the animal would have to be re-familiarized with the boy at least once or twice a day.

Why? Why did dogs who had always had the same master remember him without any difficulty, even though they seemed to have to reinvestigate their surroundings periodically? Why would Ugly, for instance, remember him joyfully when his ship came? And why would Ugly have to be re-familiarized with this apartment, in which he'd lived with Fay, off and on, for all this time?

The Kinnard dog, whose master insisted on building each new house in a carbon-copy of the previous, didn't have anywhere near as much trouble. Why?

He'd heard rumours that some people were recording canine memories on minitape, but that sort of story was generally classified along with the jokes about the old virgin who switched vaults with her nubile young niece.

Still and all, there might be something in that. He'd have to ask Monkreeve. Monkreeve was the Grand Old Man of the crowd. He had memories the rest of them hadn't even thought of yet.

Fay emptied his glass and got up to mix another drink. He was thinking harder than he had for a long time – and he could not help feeling that he was making a fool of himself. Nobody else had ever asked questions like this. Not where others could hear them, at any rate.

He sat back down in his chair, fingers laced around the glass while the *Missa* ended and the *Lieutenant Kije* suite caught up the tempo of the city as it quickened beneath showers of neon.

PLAY ME. Like a music tape, the memory vault held his life tightly knit in the nested spindles of bright, imperishable minitape.

What, he suddenly asked himself, would happen if he didn't play it tonight?

'If your surroundings seem unfamiliar, or you have any other reason to suspect your environment and situation are not usual . . .

'Obligated by strict law to direct you . . .

'Do not be alarmed . . .'

What? What was behind the whispered stories, the jokes:

'What did the girl in the playback booth say to the young man who walked in by mistake?

'Man, this has been the *busiest* Twenty-seventh of July!' (Laughter.)

The thought struck him that there might be all sorts of information concealed in his fund of party conversation.

'If you wish to get to heaven,
Stay away from twenty-seven.'

And there it was again. Twenty-seven. July Twenty-seventh, this time conglomerated with a hangover reference to religion. And that was interesting, too. Man had religions, of course – schismatic trace sects that offered no universally appealing reward to make them really popular. But they must have been really big once, judging by the stamp they'd left on oaths and idiomatic expressions. Why? What did they have? Why had two billion people integrated words like 'Heaven', 'Lord God', and 'Christ' into the language so thoroughly that they had endured ten kiloyears?

July Twenty-seventh when? Year?

What would happen to him if he ignored PLAY ME just this once?

He had the feeling that he knew all this; that he had learned it at the same time that he had learned to comb his hair and cut his fingernails, take showers and brush his teeth. But he did all that more or less automatically now.

Maybe it was time he thought about it.

But nobody else did. Not even Monkreeve.

So what? Who was Monkreeve, really? Didn't the very fact that he had thought of it make it all right? That *was* the basis on which they judged everything else, wasn't it?

That boy and his dog had really started something.

He realized several things simultaneously, and set his glass down with a quick *thump*. He couldn't remember the dog's name. And he was definitely letting the simple problem of following his conscience – and his wounded pride – lead him into far deeper intellectual waters than any boy and his dog had a right.

His cheeks went cold as he tried to remember the name of this morning's hotel, and he shivered violently. He looked at the box labelled PLAY ME.

'Yes,' he told it. 'Yes, definitely.'

3

Fay awoke to a bright, sunny morning. The date on his calendar-clock was 16 April 11958, and he grinned at it while he removed the vault's playback contacts from the bare places on his scalp. He noted that all the memories he had brought back from Europe had been re-recorded for the apartment's spare vault, and that the current minitape had advanced the shining notch necessary to record yesterday.

He looked at that notch and frowned. It looked like an editing scratch, and was. It was always there, every morning, but he knew it covered nothing more than the normal Traumatic pause between recording and playback. He'd been told that it was the one memory nobody wanted to keep, and certainly he'd never missed editing it – or, of course, remembered doing it. It was a normal part of the hypnotic action pattern set by the recorder to guide him when he switched over from record to playback, his mind practically blank by that time.

He'd never seen a tape, no matter whose, that did not bear that one scratch to mark each day. He took pride in the fact that a good many tapes were so hashed out and romanticized as to be almost pure fiction. He hadn't been lying to the boy's father – and he noted the presence of that memory with the utmost satisfaction – he had a driving basic need to see everything, hear everything, sense each day and its events to their fullest, and to remember them with sharp perfect clarity.

He laughed at the vault as he kicked it shut on his way to the bathroom. 'Not until tonight,' he said to PLAY ME, and then teetered for a breathless moment as he struggled to regain his balance. He set his foot down with a laugh, his eyes sparkling.

'Who needs a car to live dangerously?' he asked himself. But that brought back the memory of the boy, and his lips straightened. Nevertheless, it was a beautiful day, and the basic depression of yesterday was gone. He thought of all the people he knew in the city, one of whom, at least, would be sure to have a contact somewhere or the other that would solve his problem for him.

He ate his breakfast heartily, soaking for an hour in the sensual grip of his bathtub's safety slinging while he spooned the vitalizing porridge, then shrugged into a violent bathrobe and began calling people on the telephone.

He hadn't realized how long he'd been gone, he reflected, after Vera, his welcome to her apartment finished, had left him with a drink while she changed. It was, of course, only natural that some of the old crowd had changed their habits or themselves gone travelling in his absence. Nevertheless, he still felt a little taken aback at the old phone numbers that were no longer valid, or the really astonishing amount of people who seemed to have edited him out of their memories. Kinnard, of all people! And Lorraine.

Somehow, he'd never thought Lorraine would go editor.

'Ready, Kes?'

Vera was wearing a really amazing dress. Apparently, America had gone back towards conservatism, as he might have guessed from his own wardrobe.

Vera, too, had changed somehow – too subtly for him to detect, here in surroundings where he had never seen her before. Hadn't she always been resistant to the fad of completely doing apartments over every seventy years? He seemed to remember it that way, but even with minitapes, the evidence of the eye always took precedence over the nudge of memory. Still, she at least knew where Monkreeve was, which was something he hadn't been able to find out for himself.

'Uh-huh. Where're we going?'

She smiled and kissed the tip of his nose. 'Relax, Kes. Let it happen.'

'Um.'

'Grasshoppers as distinct from ants, people given to dancing and similar gay pursuits, or devotees to stimulants,' Monkreeve babbled, gesturing extravagantly. 'Take your pick of derivations.' He washed down a pill of some sort and braced himself theatrically. 'I've given up on the entymology. What'd you say your name was?'

Fay grimaced. He disliked Hoppers and Hopper parties – particularly in this instance. He wished heartily that Vera had told him what had happened to Monkreeve before she brought him here.

He caught a glimpse of her in the centre of an hysterical knot of people, dancing with her seven petticoats held high.

'Whoee!' Monkreeve burst out, detecting the effects of the pill among the other explosions in his system. Fay gave him a searching look, and decided, from the size of his pupils,

that he could probably convince himself into an identical state on bread pills, and more than likely was.

'Got a problem, hey, Lad?' Monkreeve asked wildly. 'Got a dog problem.' He put his finger in his mouth and burlesqued Thought. 'Got a dog, got a problem, got a problem, got a dog,' he chanted. 'Hell!' he exploded, 'go see old Williamson. Old Williamson knows everything. Ask him anything. Sure,' he snickered, 'ask him anything.'

'Thanks, Monk,' Fay said. 'Glad to've met you,' he added in the accepted polite form with editors, and moved towards Vera.

'Sure, sure, Kid. Ditto and check. Whatcha say your name was?'

Fay pretended to be out of earshot, brushed by a couple who were dancing in a tight circle to no music at all, and delved into the crowd around Vera.

'Hi, Kes!' Vera exclaimed, looking up and laughing. 'Did Monk give you any leads?'

'Monk has a monkey on his back, he thinks,' Fay said shortly, a queasy feeling in his throat.

'Well, why not try that on the kid? He might like a change.' Vera broke into fresh laughter. Suddenly an inspiration came to her, and she began to sing.

'Oh where, oh where, has my little dog gone? Oh where, oh where can he be.'

The rest of the crowd picked it up. Vera must have told them about his search, for they sang it with uproarious gusto.

Fay turned on his heel and walked out.

The halls of the University library were dim grey, padded with plastic sponge, curving gently with no sharp corners. Doorways slid into walls, the sponge muffled sound, and he wore issued clothes into which he had been allowed to trans-

fer only those personal items which could not possibly cut or pry. Even his vault had been encased in a ball of cellular sponge plastic, and his guide stayed carefully away from him, in case he should fall or stumble. The guide carried a first-aid kit, and like all the library staff, was a certified Doctor of Theoretical Medicine.

'This is Dr Williamson's interview chamber,' the guide told him softly, and pressed a button concealed under the sponge. The door slid back, and Fay stepped into the padded interior of the chamber, divided down the middle by a sheet of clear, thick plastic. There was no furniture to bump into, of course. The guide made sure he was safely in, out of the door's track, and closed it carefully after he had stepped out.

Fay sat down on the soft floor and waited. He started wondering what had happened to the old crowd, but he had barely found time to begin when the door on the other side of the partition opened and Dr Williamson came in. Oddly enough, his physiological age was less than Fay's, but he carried himself like an old man, and his entire manner radiated the same feeling.

He looked at Fay distastefully. 'Hopper, isn't it? What're you doing here?'

Fay got to his feet. 'No, sir. Dilly, if you will, but not a Hopper.' Coming so soon after the party, Williamson's remark bit deep.

'Six of one, half a dozen of the other, in time,' Williamson said curtly. 'Sit down.' He lowered himself slowly, testing each new adjustment of his muscles and bones before he made the next. He winced faintly when Fay dropped to the floor with defiant overcarelessness. 'Well – go on. You wouldn't be here if the front desk didn't think your research was at least interesting.'

Fay surveyed him carefully before he answered. Then he

sighed, shrugged mentally, and began. 'I want to find a dog for a little boy,' he said, feeling more than foolish.

Williamson snorted: 'What leads you to believe this is the ASPCA?'

'ASPCA, sir?'

Williamson threw his hands carefully up to heaven and snorted again. Apparently, everything Fay said served to confirm some judgement of mankind on his part.

He did not explain, and Fay finally decided he was waiting. There was a minute's pause, and then Fay said awkwardly: 'I assume that's some kind of animal shelter. But that wouldn't serve my purpose. I need a dog that ... that *remembers*.'

Williamson put the tips of his fingers together and pursed his lips. 'So. A dog that remembers, eh?' He looked at Fay with considerably more interest, the look in his eyes sharpening.

'You look like any other brainless jackanapes,' he mused, 'but apparently there's some grey matter left in your artfully coiffed skull after all.' Williamson was partially bald.

'What would you say', Williamson continued, 'if I offered to let you enrol here as an Apprentice Liberor?'

'Would I find out how to get that kind of dog?'

A flicker of impatience crossed Williamson's face. 'In time, in time. But that's beside the point.'

'I ... I haven't got much time, sir,' Fay said haltingly. Obviously, Williamson had the answer to his question. But would he part with it, and if he was going to, why this rigmarole?

Williamson gestured with careful impatience. 'Time is unimportant. And especially here, where we avoid the law of averages almost entirely. But there are various uses for time, and I have better ones than this. Will you enrol? Quick, man!'

'I – Dr Williamson, I'm grateful for your offer, but right now all I'd like to know is how to get a dog.' Fay was conscious of a mounting impatience of his own.

Williamson got carefully to his feet and looked at Fay with barely suppressed anger.

'Young man, you're living proof that our basic policy is right. I wouldn't trust an ignoramus like you with the information required to cut his throat.

'Do you realize where you are?' He gestured at the walls. 'In this building is the world's greatest repository of knowledge. For ten thousand years we have been accumulating opinion and further theoretical data on every known scientific and artistic theory extant in 1973. We have data that will enable Man to go to the stars, travel ocean bottoms, and explore Jupiter. We have here the raw material of symphonies and sonatas that make your current addictions sound like a tin-cup beggar's fiddle. We have the seed of paintings that would make you spatter whitewash over the daubs you treasure, and verse that would drive you mad. And you want me to find you a dog!'

Fay had gotten to his own feet. Williamson's anger washed over him in battering waves, but one thing remained clear, and he kept to it stubbornly.

'Then you won't tell me.'

'No, I will *not* tell you! I thought for a moment that you had actually managed to perceive something of your environment, but you have demonstrated my error. You are dismissed.' Williamson turned and stamped carefully out of his half of the interview chamber, and the door slid open behind Fay.

Still and all, he had learned something. He had learned that there was something important about dogs not remembering, and he had a date: 1973.

He sat in his apartment, his eyes once more fixed on PLAY ME, and tried a thought on for size: 27 July 1973.

It made more sense that way than it did when the two parts were separated – which could mean nothing, of course. Dates were like the jigsaw puzzles that were manufactured for physiological four-year-olds: they fit together no matter how the pieces were matched.

When had the human race stopped having children?

The thought smashed him bolt upright in his chair, spilling his drink.

He had never thought of that. Never once had he questioned the fact that everyone was frozen at some apparently arbitrary physiological age. He had learned that such-and-such combined anatomical and psychological configuration was indicative of one physiological age, that a different configuration indicated another. Or had he? Couldn't he tell instinctively – or, rather, couldn't he tell as though the word 'age' were applicable to humans as well as inanimate objects?

A lesser thought followed close on the heels of the first: exactly the same thing could be said of dogs, or canaries or parakeets, as well as the occasional cat that hadn't gone wild.

'Gone' wild? Hadn't most cats always been wild?

Just exactly what memories were buried in his mind, in hiding – or rather, since he was basically honest with himself, what memories had he taught himself to ignore? And why?

His skin crawled. Suddenly, his careful, flower-to-flower world was tinged with frost around him, and brown, bare, and sharply ragged stumps were left standing. The boy and his dog had been deep water indeed – for his tentative toe had baited a monster of continuous and expanding questions to fang him with rows of dangerous answers.

He shook himself and took another drink. He looked at PLAY ME, and knew where the worst answers must be.

4

He awoke, and there were things stuck to his temples. He pulled them loose and sat up, staring at the furnishings and the machine that sat beside his bed, trailing wires.

The lights were on, but the illumination was so thoroughly diffused that he could not find its source. The furniture was just short of the radical in design, and he had certainly never worn pyjamas to bed. He looked down at them and grunted.

He looked at the machine again, and felt his temples where the contacts had rested. His fingers came away sticky, and he frowned. Was it some sort of encephalograph? Why?

He looked around again. There was a faint possibility that he was recovering from psychiatric treatment, but this was certainly no sanatorium room.

There was a white placard across the room, with some sort of printing on it. Since it offered the only possible source of information, he got off the bed cautiously and, when he encountered no dizziness or weakness, crossed over to it. He stood looking at it, lips pursed and brow furrowed, while he picked his way through the rather simplified orthography.

Christopher Jordan Fay:

If your surroundings seem unfamiliar, or you have any other reason to suspect that your environment and situation are unusual, do not be alarmed, and follow these directions without anxiety, even if they seem strange to you. If you find yourself unable to do so, for any reason whatsoever, please return to the bed and read the instructions printed on the machine beside it. In this case, the nearest 'free public playback booth' is the supplementary cabinet you see built into the head of the bed. Open the doors and read the supplementary instructions printed inside. In any case, do not be alarmed, and if you are unable or unwilling to perform any of the actions requested above simply dial 'O' on the telephone you see across the room.

Fay looked around once more, identified the various objects, and read on.

The operator, like all citizens, is required by strict law to furnish you with assistance.

If, on the other hand, you feel sufficiently calm or are commensurately curious, please follow these directions:

Return to the bed and restore the contacts to the places where they were attached. Switch the dial marked 'Record-Playback-Auxiliary Record' to the 'Auxiliary Record' position. You will then have three minutes to place your right forearm on the grooved portion atop the machine. Make certain your arm fits snugly – the groove is custom-moulded to accept your arm perfectly in one position only.

Finally, lie back and relax. All other actions are automatic.

For your information, you have suffered from loss of memory, and this device will restore it to you.

Should you be willing to follow the above directions, please accept our thanks.

Fay's tongue bulged his left cheek, and he restrained a grin. Apparently, his generator had been an unqualified success. He looked at the printing again, just to be certain, and confirmed the suspicion that it had been done by his own hand. Then, as a conclusive check, he prowled the apartment in search of a calendar. He finally located the calendar-clock, inexpertly concealed in a bureau drawer, and looked at the date.

That was his only true surprise. He whistled shrilly at the date, but finally shrugged and put the clock back. He sat down in a convenient chair, and pondered.

The generator was working just as he'd expected, the signal bouncing off the heaviside layer without perceptible loss of strength, covering the Earth. As to what would happen when it exhausted its radio-active fuel in another five thousand years, he had no idea, but he suspected that he

would simply refuel it. Apparently, he still had plenty of money, or whatever medium of exchange existed in the future – or, rather existed now. Well, he'd provided for it.

Interesting, how his mind kept insisting it was 27 July 1973. This tendency to think of the actual date as 'the future' could be confusing if he didn't allow for it.

Actually, he was some ten-thousand-and-thirty-eight years old, rather than the thirty-seven his mind insisted on. But his memories carried him only to 1973, while, he strongly suspected, the Kester Fay who had written that naive message had memories that *began* shortly thereafter.

The generator broadcast a signal which enabled body cells to repair themselves with one hundred per cent perfection, rather than the usual less-than-perfect of living organisms. The result was that none of the higher organisms aged, in any respect. Just the higher ones, fortunately, or there wouldn't even be yeast derivatives to eat.

But, of course, that included brain cells, too. Memory was a process of damaging brain cells much as a phonograph recording head damaged a blank record disc. In order to re-live the memory, the organism had only to play it back, as a record is played. Except that, so long as the generator continued to put out the signal, brain cells, too, repaired themselves completely. Not immediately, of course, for the body took a little time to act. But no one could possibly sleep through a night and remember anything about the day before. Amnesia was the price of immortality.

He stood up, went to the liquor cabinet he'd located in his search, and mixed himself a drink, noticing again how little, actually, the world had progressed in ten thousand years. Cultural paralysis, more than likely, under the impact of two and a half billion individuals each trying to make his compromise with the essential boredom of eternal life.

The drink was very good, the whisky better than any he was used to. He envied himself.

They'd finally beaten amnesia, as he suspected the human race would. Probably by writing notes to themselves at first, while panic and hysteria cloaked the world and 27 July marched down through the seasons and astronomers went mad.

The stimulated cells, of course, did not repair the damage done to them before the generator went into operation. They took what they already had as a model, and clung to it fiercely.

He grimaced. Their improved encephalograph probably rammed in so much information so fast that their artificial memories blanketed the comparatively small amount of information which they had acquired up to the 27th. Or, somewhat more likely, the period of panic had been so bad that they refused to probe beyond it. If that was a tape-recording encephalograph, editing should be easily possible.

'I suspect', he said aloud, 'that what I am remembering now is part of a large suppressed area in my own memory.' He chuckled at the thought that his entire life had been a blank to himself, and finished the drink.

And what he was experiencing now was an attempt on his own part to get that blank period on tape, circumventing the censors that kept him from doing it when he had his entire memory.

And that took courage. He mixed another drink and toasted himself. 'Here's to you, Kester Fay +. I'm glad to learn I've got guts.'

The whisky was extremely good.

And the fact that Kester Fay had survived the traumatic hiatus between the Twenty-seventh and the time when he had his artificial memory was proof that They hadn't gotten to him before the smash-up.

Paranoid, was he?

He'd stopped the accelerating race towards Tee-Total War, hadn't he?

They hadn't been able to stop him, that was certain. He'd preserved the race of Man, hadn't he?

Psychotic? He finished the drink and chuckled. Intellectually, he had to admit that anyone who imposed immortality on all his fellow beings without asking their permission was begging for the label.

But, of course, he knew he wasn't psychotic. If he were, he wouldn't be so insistent on the English 'Kester' for a nickname rather than the American 'Chris.'

He put the glass down regretfully. Ah, well – time to give himself *all* his memories back. Why was his right arm so strong?

He lay down on the bed, replaced the contacts, and felt the needle slip out of its recess in the forearm trough and slide into a vein.

Scopolamine derivative of some sort, he decided. Machinery hummed and clicked in the cabinets at the head of the bed, and a blank tape spindle popped into position in the vault, which rested on a specially-built stand beside the bed.

Complicated, he thought dimly as he felt the drug pumping into his system. I could probably streamline it down considerably.

He found time to think once more of his basic courage. Kester Fay must still be a rampant individual, even in his stagnant, conservative, ten-thousand-year-weighty civilization.

Apparently, nothing could change his fundamental character.

He sank into a coma with a faint smile.

The vault's volume control in the playback cycle was set

to 'Emergency Overload'. Memories hammered at him ruthlessly, ravaging brain tissue, carving new channels through the packed silt of repair, foaming, bubbling, hissing with voracious energy and shattering impetus.

His face ran through agonized changes in his sleep. He pawed uncertainly and feebly at the contacts on his scalp, but the vital conditioning held. He never reached them, though he tried, and, failing, tried, and tried through the long night, while sweat poured down his face and soaked into his pillow, and he moaned, while the minitapes clicked and spun, one after the other, and gave him back the past.

It was 27 July 1973, and he shivered with cold, uncomprehendingly staring at the frost on the windows, with the note dated 27/7/73 in his hand.

It was 27 July 1973, and he was faint with hunger as he tried to get the lights to work. Apparently, the power was off. He struck a match and stared down at the series of notes, some of them smudged with much unremembered handling, all dated 27 July 1973.

It was 27 July 1973, and the men who tried to tell him it was really Fall in 1989, clustered around his bed in the crowded hospital ward, were lying. But they told him his basic patents on controlled artificial radioactivity had made it possible to power the complicated machinery they were teaching him to use. And though, for some reason, money as an interest-gathering medium was no longer valid, they told him that in his special case, in gratitude, they'd arranged things so there'd be a series of royalties and licensing fees, which would be paid into his accounts automatically. He wouldn't even have to check on them, or know specifically where they came from. But the important part came when they assured him that the machinery – the 'vault', and the 'minitapes', whatever they were, would cure his trouble.

He was grateful for that, because he'd been afraid for a long time that he was going insane. Now he could forget his troubles.

Kester Fay pulled the vault contacts off his forehead and sat up to see if there was an editing scratch on the tape.

But, of course, there wasn't. He knew it before he'd raised his head an inch, and he almost collapsed, sitting on the edge of the bed with his head in his hands.

He was his own monster. He had no idea of what most of the words he'd used in those memories had meant, but even as he sat there, he could feel his mind hesitatingly making the linkages and assigning tags to the jumbled concepts and frightening rationalizations he'd already remembered.

He got up gingerly, and wandered about the apartment, straightening out the drawers he'd upset during his amnesiac period. He came to the empty glass, frowned at it, shrugged, and mixed a drink.

He felt better afterwards, the glow of 100 Proof working itself into his system. The effects wouldn't last, of course – intoxication was a result of damage to the brain cells – but the first kick was real enough. Moreover, it was all he'd gotten accustomed to, during the past ten kiloyears, just as the Hoppers could drug themselves eternally.

Moreover, ten thousand years of having a new personality seemed to have cured the psychosis he'd had with his old one. He felt absolutely no desire to change the world single-handed.

Had it, now? Had it? Wasn't being a dilettante the result of an inner conviction that you were too good for routine living?

And didn't he want to turn the generator off, now that he knew what it did and where it was?

He finished the drink and bounced the glass in his palm. There was nothing that said he had to reach a decision right this minute. He'd had ten kiloyears. It could wait a little longer.

He bathed to the accompaniment of thoughts he'd always ignored before – thoughts about things that weren't his problem, then. Like incubators full of babies ten kiloyears old, and pregnant women, and paralytics.

He balanced that against hydrogen bombs, and still the scales did not tip.

Then he added something he had never known before, but that he had now, and understood why no one ever ventured to cross Twenty-seven, or to remember it if he had. For one instant, he, too, stopped still at his bath and considered ripping the memory out of his minitapes.

He added Death.

But he knew he was lost, now. For better or worse, the water had closed over his head, and if he edited the memory now, he would seek it out again some day. For a moment, he wondered if that was precisely what he had done, countless times before.

He gave it up. It could wait – if he stayed sane. At any rate, he knew how to get the little boy his dog, now.

He built a signal generator to cancel out the effect of the big one, purring implacably in its mountain shaft, sending out its eternal, unshieldable signal. He blanketed one room of his apartment with the cancelling wave, and added six months to his age by staying in it for hours during the eighteen months it took to mate Ugly and raise the best pup, for the stimulating wave was the answer to sterility, too. Foetuses could not develop.

He cut himself from the Dilly crowd, what was left of it, and raised the pup. And it was more than six months he

added to his age, for all that time he debated and weighed, and remembered.

And by the time he was ready, he still did not know what he was going to do about the greater problem. Still and all, he had a new dog for the boy.

He packed the cancelling generator and the dog in his car, and drove back up the road he had come.

Finally, he knocked on Riker's door, the dog under one arm, the generator under the other.

Riker answered his knock and looked at him curiously.

'I'm ... I'm Kester Fay, Mr Riker,' he said hesitatingly. 'I've brought your boy that dog I promised.'

Riker looked at the dog and the bulky generator under his arm, and Fay shifted his load awkwardly, the dangling vault interfering with his movements. Light as it was, the vault was a bulky thing. 'Don't you remember me?'

Riker blinked thoughtfully, his forehead knotting. Then he shook his head. 'No ... no, I guess not, Mr Fay.' He looked suspiciously at Fay's clothes, which hadn't been changed in three days. Then he nodded.

'Uh ... I'm sorry, mister, but I guess I must have edited it.' He smiled in embarrassment. 'Come to think of it, I've wondered if we didn't have a dog sometime. I hope it wasn't too important to you.'

Fay looked at him. He found it impossible to think of anything to say. Finally, he shrugged.

'Well,' he said, 'your boy doesn't have a dog now, does he?'

Riker shook his head. 'Nope. You know – it's a funny thing, what with the editing and everything, but he knows a kid with a dog, and sometimes he pesters the life out of me to get him one.' Riker shrugged. 'You know how kids are.'

'Will you take this one?' He held out the squirming animal.

'Sure. Mighty grateful. But I guess we both know this won't work out too well.' He reached out and took the dog.

'This one sure will,' Fay said. He gave Riker the generator. 'Just turn this on for a while in the same room with your son and the dog. It won't hurt anything, but the dog'll remember.'

Riker looked at him sceptically.

'Try it,' Fay said, but Riker's eyes were narrowing, and he gave Fay both the dog and the generator back.

'No, thanks,' he said. 'I'm not trying anything like that from a guy that comes out of nowhere in the middle of the night.'

'Please, Mr Riker. I promise – '

'Buddy, you're trespassing. I won't draw more than half a hectoyear if I slug you.'

Fay's shoulders slumped. 'All right,' he sighed, and turned around. He heard Riker slam the heavy door behind him.

But as he trudged down the walk, his shoulders lifted, and his lips set in a line.

There has to be an end somewhere, he thought. Each thing has to end, or there will never be any room for beginnings. He turned around to be sure no one in the house was watching, and released the dog. He'd be found in the morning, and things might be different by then.

He climbed into the car and drove quickly away, leaving the dog behind. Somewhere outside of town, he threw the cancelling generator outside, onto the concrete highway, and heard it smash. He unchained his memory vault, and threw it out, too.

There had to be an end. Even an end to starlit nights and the sound of a powerful motor. An end to the memory of sunset in the Piazza San Marco, and the sight of snow on Chamonix. An end to good whisky. For him, there had to be an end – so that others could come after. He pointed the car

towards the generator's location, and reflected that he had twenty or thirty years left, anyway.

He flexed his curiously light arm.

Track 12

J. G. BALLARD

'GUESS again,' Sheringham said.

Maxted clipped on the headphones, carefully settled them over his ears. He concentrated as the disc began to spin, trying to catch some echo of identity.

The sound was a rapid metallic rustling, like iron filings splashing through a funnel. It ran for ten seconds, repeated itself a dozen times, then ended abruptly in a string of blips.

'Well?' Sheringham asked. 'What is it?'

Maxted pulled off his headphones, rubbed one of his ears. He had been listening to the records for hours and his ears felt bruised and numb.

'Could be anything. An ice-cube melting?'

Sheringham shook his head, his little beard wagging.

Maxted shrugged. 'A couple of galaxies colliding?'

'No. Sound waves don't travel through space. I'll give you a clue. It's one of those *proverbial* sounds.' He seemed to be enjoying the catechism.

Maxted lit a cigarette, threw the match onto the laboratory bench. The head melted a tiny pool of wax, froze, and left a shallow black scar. He watched it pleasurably, conscious of Sheringham fidgeting beside him.

He pumped his brains for an obscene simile. 'What about a fly – '

'Time's up,' Sheringham cut in. '*A pin dropping.*' He took the three-inch disc off the player, and angled it into its sleeve.

'In actual fall, that is, not impact. We used a fifty-foot shaft and eight microphones. I thought you'd get that one.'

He reached for the last record, a twelve-inch LP, but

Maxted stood up before he got it to the turntable. Through the french windows he could see the patio, a table, glasses and decanter gleaming in the darkness. Sheringham and his infantile games suddenly irritated him; he felt impatient with himself for tolerating the man so long.

'Let's get some air,' he said brusquely, shouldering past one of the amplifier rigs: 'My ears feel like gongs.'

'By all means,' Sheringham agreed promptly. He placed the record carefully on the turntable and switched off the player. 'I want to save this one until later, anyway.'

They went out into the warm evening air. Sheringham turned on the japanese lanterns and they stretched back in the wicker chairs under the open sky.

'I hope you weren't too bored,' Sheringham said as he handled the decanter. 'Microsonics is a fascinating hobby, but I'm afraid I may have let it become an obsession.'

Maxted grunted noncommittally. 'Some of the records are interesting,' he admitted. 'They have a sort of crazy novelty value, like blown-up photographs of moths' faces and razor blades. Despite what you claim, though, I can't believe microsonics will ever become a scientific tool. It's just an elaborate laboratory toy.'

Sheringham shook his head. 'You're completely wrong, of course. Remember the cell division series I played first of all? Amplified 100,000 times animal cell division sounds like a lot of girders and steel sheets being ripped apart – how did you put it? – a car smash in slow motion. On the other hand, plant cell division is an electronic poem, all soft chords and bubbling tones. Now there you have a perfect illustration of how microsonics can reveal the distinction between the animal and plant kingdoms.'

'Seems a damned roundabout way of doing it,' Maxted commented, helping himself to soda. 'You might as well

calculate the speed of your car from the apparent motion of the stars. Possible, but it's easier to look at the speedometer.'

Sheringham nodded, watching Maxted closely across the table. His interest in the conversation appeared to have exhausted itself, and the two men sat silently with their glasses. Strangely, the hostility between them, of so many years' standing, now became less veiled, the contrast of personality, manner and physique more pronounced. Maxted, a tall fleshy man with a coarse handsome face, lounged back almost horizontally in his chair, thinking about Susan Sheringham. She was at the Turnbull's party, and but for the fact that it was no longer discreet of him to be seen at the Turnbull's – for the all-too-familiar reason – he would have passed the evening with her, rather than with her grotesque little husband.

He surveyed Sheringham with as much detachment as he could muster, wondering whether this prim unattractive man, with his pedantry and in-bred academic humour, had any redeeming qualities whatever. None, certainly, at a casual glance, though it required some courage and pride to have invited him round that evening. His motives, however, would be typically eccentric.

The pretext, Maxted reflected, had been slight enough – Sheringham, professor of biochemistry at the university, maintained a lavish home laboratory; Maxted, run-down athlete with a bad degree, acted as torpedo-man for a company manufacturing electron microscopes; a visit, Sheringham had suggested over the phone, might be to the profit of both.

Of course, nothing of this had in fact been mentioned. But nor, as yet, had he referred to Susan, the real subject of the evening's charade. Maxted speculated upon the possible routes Sheringham might take towards the inevitable confrontation scene; not for him the nervous circular pacing, the

well-thumbed photostat, or the thug at the shoulder. There was a vicious adolescent streak running through Sheringham –

Maxted broke out of his reverie abruptly. The air in the patio had become suddenly cooler, almost as if a powerful refrigerating unit had been switched on. A rash of gooseflesh raced up his thighs and down the back of his neck, and he reached forward and finished what was left of his whisky.

'Cold out here,' he commented.

Sheringham glanced at his watch. 'Is it?' he said. There was a hint of indecision in his voice; for a moment he seemed to be waiting for a signal. Then he pulled himself together and, with an odd half-smile, said: 'Time for the last record.'

'What do you mean?' Maxted asked.

'Don't move,' Sheringham said. He stood up. 'I'll put it on.' He pointed to a loudspeaker screwed to the wall above Maxted's head, grinned, and ducked out.

Shivering uncomfortably, Maxted peered up into the silent evening sky, hoping that the vertical current of cold air that had sliced down into the patio would soon dissipate itself.

A low noise crackled from the speaker, multiplied by a circle of other speakers which he noticed for the first time had been slung among the trellis-work around the patio.

Shaking his head sadly at Sheringham's antics, he decided to help himself to more whisky. As he stretched across the table he swayed and rolled back uncontrollably into his chair. His stomach seemed to be full of mercury, ice-cold, and enormously heavy. He pushed himself forward again, trying to reach the glass, and knocked it across the table. His brain began to fade, and he leaned his elbows helplessly on the glass edge of the table and felt his head fall onto his wrists.

When he looked up again Sheringham was standing in front of him, smiling sympathetically.

'Not too good, eh?' he said.

Breathing with difficulty, Maxted managed to lean back. He tried to speak to Sheringham, but he could no longer remember any words. His heart switchbacked, and he grimaced at the pain.

'Don't worry,' Sheringham assured him. 'The fibrillation is only a side effect. Disconcerting, perhaps, but it will soon pass.'

He strolled leisurely around the patio, scrutinizing Maxted from several angles. Evidently satisfied, he sat down on the table. He picked up the siphon and swirled the contents about. 'Chromium cyanate. Inhibits the coenzyme system controlling the body's fluid balances, floods hydroxyl ions into the bloodstream. In brief, you drown. Really drown, that is, not merely suffocate as you would if you were immersed in an external bath. However, I mustn't distract you.'

He inclined his head at the speakers. Being fed into the patio was a curiously muffled spongy noise, like elastic waves lapping in a latex sea. The rhythms were huge and ungainly, overlaid by the deep leaden wheezing of a gigantic bellows. Barely audible at first, the sounds rose until they filled the patio and shut out the few traffic noises along the highway.

'Fantastic, isn't it?' Sheringham said. Twirling the siphon by its neck he stepped over Maxted's legs and adjusted the tone control under one of the speaker boxes. He looked blithe and spruce, almost ten years younger. 'These are 30-second repeats, 400 microsones, amplification one thousand. I admit I've edited the track a little, but it's still remarkable how repulsive a beautiful sound can become. You'll never guess what this was.'

Maxted stirred sluggishly. The lake of mercury in his stomach was as cold and bottomless as an oceanic trench,

and his arms and legs had become enormous, like the bloated appendages of a drowned giant. He could just see Sheringham bobbing about in front of him, and hear the slow beating of the sea in the distance. Nearer now, it pounded with a dull insistent rhythm, the great waves ballooning and bursting like bubbles in a lava sea.

'I'll tell you, Maxted, it took me a year to get that recording,' Sheringham was saying. He straddled Maxted, gesturing with the siphon. 'A year. Do you know how ugly a year can be?' For a moment he paused, then tore himself from the memory. 'Last Saturday, just after midnight, you and Susan were lying back in this same chair. You know, Maxted, there are audio-probes everywhere here. Slim as pencils, with a six-inch focus. I had four in that headrest alone.' He added, as a footnote: 'The wind is your own breathing, fairly heavy at the time, if I remember; your interlocked pulses produced the thunder effect.'

Maxted drifted in a wash of sound.

Some while later Sheringham's face filled his eyes, beard wagging, mouth working wildly.

'Maxted! You've only two more guesses, so for God's sake concentrate,' he shouted irritably, his voice almost lost among the thunder rolling from the sea. 'Come on, man, what is it? Maxted!' he bellowed. He leapt for the nearest loudspeaker and drove up the volume. The sound boomed out of the patio, reverberating into the night.

Maxted had almost gone now, his fading identity a small featureless island nearly eroded by the waves beating across it.

Sheringham knelt down and shouted into his ear.

'Maxted, can you hear the sea? Do you know where you're drowning?'

A succession of gigantic flaccid waves, each more lumbering and enveloping than the last, rode down upon them.

'In a kiss!' Sheringham screamed. 'A kiss!'

The island slipped and slid away into the molten shelf of the sea.

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