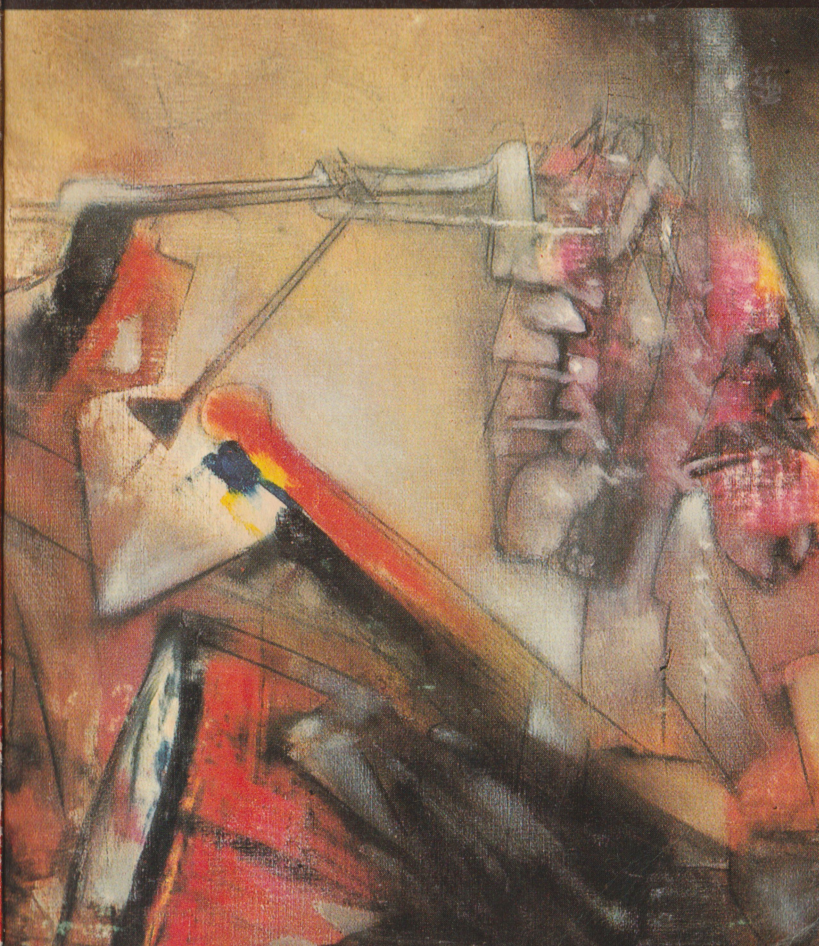
Penguin Science Fiction 3/6

Yet More Penguin Science Fiction

Edited by Brian Aldiss



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Yet More Penguin Science Fiction

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*; *Equator*; and *The Dark Light Years*. He edited two earlier collections, *Penguin Science Fiction* and *More Penguin Science Fiction*, which are still available. Such spare time as he has he devotes to painting, swimming, talking, and eating curry.

Yet More Penguin Science Fiction

An anthology edited by
Brian W. Aldiss

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Introduction

The images are what attract me in science fiction, more even than the surprises and the ideas and the crazy plots.

For a decade now I've been haunted by the vision of an immense and wounded machine lumbering over the surface of the moon, spitting out its anger at anything or anyone who dares to come within range. Only recently did I track down the story that contained this device and found it was written by Walter Miller, the author of *Canticle for Leibowitz*, whose short story 'Command Performance' was included in the first of these Penguin anthologies. You will find the story about the machine on the moon here.

Miller skilfully portrays the frustration and rage felt by both man and machine in the story; by the end of it, like so many of the better science fiction stories, it seems to have taken on a wider meaning than its limited context would lead one to expect, possibly because tales of the future are like shadows of our present, thrown upon and enlarged against some great platonic cave wall, so that the machine and the man become – in the anonymity granted by futurity – Machine and Man.

Well-written though the story is, its strength lies in its central image of the machine lumbering after its not-entirely-innocent prey. This image seems to be able to exist outside its context, outside its story. Once we are told about it, even without hearing the tale of which it is part, it takes our imagination. In a curious way, this is what many science fiction images do. Perhaps Baron Frankenstein's monster – a remote ancestor of the moon machine – is in this category. We know of the monster, we appreciate it,

without necessarily having read Mary Shelley's novel in which it figures.

At one of the annual science fiction conventions a group of us were talking about the power of these images to live outside their contexts. Two of the images discussed then are worth mentioning here, because they well represent two very different veins that run through science fiction and thus through this collection of stories.

The first vein represents the crazy side of science fiction, the sort of imagining that goes on purely for the sake of being different. It was described by science fiction writer Harry Harrison, who was talking about the first science fiction magazine he ever saw. He was seven; it was raining, his parents were out. The magazine's cover story concerned a man who found a hidden valley in the Antarctic where, thanks to a convenient range of volcanoes, the climate was semi-tropical. There, many of the giant reptiles of the Cretaceous Age still flourished; some of them, in fact, had developed their own civilization. The illustration to this story showed the hero crouching beneath a lab bench, while near him moved a *tyrannosaurus rex* in a lab coat!

We can only regard this as laughable. The idea of a civilized tyrannosaurus is too preposterous, for we have long ago accepted the more preposterous truth that suddenly, for no discoverable reason, the mighty dinosaurs of air, land, and sea died out to make way for little scurrying warm-blooded animals, some of which took the long and hard evolutionary track to becoming man. Mammals in lab coats, yes – but reptiles, no!

The second image was discussed by Tom Boardman, the publisher and critic. He spoke of an automated bomber that flew to its target half-way round the world, dropped its H-bombs, and returned to its field, where other automatic devices serviced, refuelled, and reloaded it, and sent it out again. Once more it dropped its bombs unerringly over its target – as it had done for years. Nothing else on the whole earth moved. The planet had long been dead.

One does not have to have read the stories in which this dinosaur and this bomber featured for them to make an impression, although the impressions they leave differ. Also, it is possible to date these stories roughly without hearing more about them; the first is

probably early thirties, the second very probably late forties – I.C.B.M.s have reduced the probability of an automated bomber to near zero, but the power of the symbol remains.

Examples of these two sorts of image, the mad and the chilly-sane, can be found in the stories here assembled. Arthur Porges's man heading back in time with his repeating rifle and five thousand rounds of ammunition, Arthur Clarke's alien life form digging for refuse, are good contemporary examples of the mad image; the ruins in H. B. Fyfe's story are an example of the chilly sort of image.

I believe that these images can have a validity and a power of growth in the mind even when the story in which they occur is forgotten. The process would be analogous to the way in which characters with strong relevance to our psyches keep appearing in art; Don Juan is an example. Or, on a lesser plane, there are characters that seem to have such an attraction, away and above the stories in which they appear, that their doings may be chronicled by more than one, sometimes by many, hands; Valentine Fox the ventriloquist and Sexton Blake the detective are examples from the last century and this. This validity would explain – and an explanation is needed – why many intelligent people read science fiction devotedly even when they know that much of it is dross; they are looking for the gold of valid symbols that will somehow illuminate or even further their experience.

Support for this idea comes from the late Professor C. S. Lewis's introduction to those two strange novels of George Macdonald's, *Phantasies* and *Lilith*. Myth has to be retold to every generation; it is not, therefore, the words that are important, but the arrangement of events or images they convey. Professor Lewis says, 'In this respect stories of the mythical type are at the opposite pole from lyrical poetry. If you try to take the theme of Keats's "Nightingale" apart from the very words in which he has embodied it, you find you are talking about almost nothing . . . But in a myth – in a story where the mere pattern of events is all that matters – this is not so. Any means of communication whatever which succeeds in lodging these events in our imagination has, as we say, "done the trick".'

These are dangerous words; they seem to say that lax writing is as good as controlled writing. That this is not what Professor

Lewis meant, his own myths (*Out of the Silent Planet* and *Perelandra* among them) bear out. But his argument does point startlingly to a quality of science fiction that has received little attention up till now: sf is very good at creating myths.

A myth must contain various elements: traditional values, veiled meanings, and preferably illumination of some fact or phenomenon that interests its listeners or readers. These elements are present in most of the stories selected here. They are the more striking because the traditional values are present in futuristic guise; the fear of the outsider prowling through Damon Knight's story, the sense of pride that comes before a fall in William Tenn's seriously funny story, must be as ancient as the days when myths were born – which was a long while before man got round to writing them down, and probably even before our ancestors were true men.

All of this is perhaps an unnecessarily solemn way to introduce a collection of stories that are often light-hearted – particularly Cyril Kornbluth's genial account of the trials of one Cecil Corwin, in 'MS Found in a Chinese Fortune Cookie'. The story is a good jest in its own right, but there is an equally pleasant one behind it. For there was indeed a writer of science fiction stories named Cecil Corwin; he once won a Jules Verne Award. After narrating the troublous events in 'MS Found in a Chinese Fortune Cookie', he wrote no more – for Corwin was one of the pseudonyms of Kornbluth, and this story was Kornbluth's way of getting rid of him.

Incidentally, of the writers appearing here, Cyril Kornbluth is the only one not alive today. It is pleasant that in this story he should give form to the science fiction writer's most constant but most frustrated wish: for a better world.

Among other familiar science fiction authors scintillating here are John Brunner, the English writer, James Blish, and Damon Knight, as well as writers who appeared in one or other of the first two Penguin anthologies: William Tenn, Arthur Clarke, Walter Miller, and Bertram Chandler. Of the newcomers, the oldest comer is A. E. van Vogt, whose stories never cease to arouse argument, though in fact it is several years since he has written anything new in the science fiction field. 'Fulfilment' contains his

unique mixture of madness and vision.

Omar Khayyám long ago embodied the creed of many a science fiction writer:

> Ah, love, could you and I with Him conspire
> To grasp this sorry scheme of things entire,
> Would we not shatter it to bits – and then
> Remould it nearer to the Heart's Desire!

Most of the stories in this anthology are written by world-changers. And the symbols they contain are symbols of our changing world.

The Wall Around the World

THEODORE COGSWELL

The Wall that went all the way around the World had always been there, so nobody paid much attention to it – except Porgie.

Porgie was going to find out what was on the other side of it – assuming there was another side – or break his neck trying. He was going on fourteen, an age that tends to view the word *impossible* as a meaningless term invented by adults for their own peculiar purposes. But he recognized that there were certain practical difficulties involved in scaling a glassy-smooth surface that rose over a thousand feet straight up. That's why he spent a lot of time watching the eagles.

This morning, as usual, he was late for school. He lost time finding a spot for his broomstick in the crowded rack in the schoolyard, and it was exactly six minutes after the hour as he slipped guiltily into the classroom.

For a moment he thought he was safe. Old Mr Wickens had his back to him and was chalking a pentagram on the blackboard.

But just as Porgie started to slide into his seat, the schoolmaster turned and drawled, 'I see Mr Mills has finally decided to join us.'

The class laughed, and Porgie flushed.

'What's your excuse this time Mr Mills?'

'I was watching an eagle,' said Porgie lamely.

'How nice for the eagle. And what was he doing that was of such great interest?'

'He was riding up on the wind. His wings weren't flapping or anything. He was over the box canyon that runs into the East wall, where the wind hits the Wall and goes up. The eagle just floated

in circles, going higher all the time. You know, Mr Wickens, I'll bet if you caught a whole bunch of eagles and tied ropes to them, they could lift you right up to the top of the wall!'

'That,' said Mr Wickens, 'is possible – if you could catch the eagles. Now, if you'll excuse me, I'll continue with the lecture. When invoking Elementals of the Fifth Order, care must be taken to . . .'

Porgie glazed his eyes and began to think up ways and means to catch some eagles.

The next period, Mr Wickens gave them a problem in Practical Astrology. Porgie chewed his pencil and tried to work on it, but couldn't concentrate. Nothing came out right – and when he found he had accidentally transposed a couple of signs of the zodiac at the very beginning, he gave up and began to draw plans for eagle traps. He tried one, decided it wouldn't work, started another –

'Porgie!'

He jumped. Mr Wickens, instead of being in front of the class, was standing right beside him. The schoolmaster reached down, picked up the paper Porgie had been drawing on, and looked at it. Then he grabbed Porgie by the arm and jerked him from his seat.

'Go to my study!'

As Porgie went out the door, he heard Mr Wickens say, 'The class is dismissed until I return!'

There was a sudden rush of large, medium, and small-sized boys out of the classroom. Down the corridor to the front door they pelted, and out into the bright sunshine. As they ran past Porgie, his cousin Homer skidded to a stop and accidentally on purpose jabbed an elbow into his ribs. Homer, usually called 'Bull Pup' by the kids because of his squat build and pugnacious face, was a year older than Porgie and took his seniority seriously.

'Wait'll I tell Dad about this. You'll catch it tonight!' He gave Porgie another jab and then ran out into the schoolyard to take command of a game of Warlock.

Mr Wickens unlocked the door to his study and motioned Porgie inside. Then he shut and locked it carefully behind him. He sat down in the high-backed chair behind his desk and folded his hands.

Porgie stood silently, hanging his head, filled with that helpless guilty anger that comes from conflict with superior authority.

'What were you doing instead of your lesson?' Mr Wickens demanded.

Porgie didn't answer.

Mr Wickens narrowed his eyes. The large hazel switch that rested on top of the bookcase beside the stuffed owl lifted lightly into the air, drifted across the room, and dropped into his hand.

'Well?' he said, tapping the switch on the desk.

'Eagle traps,' admitted Porgie. 'I was drawing eagle traps. I couldn't help it. The Wall made me do it.'

'Proceed.'

Porgie hesitated for a moment. The switch tapped. Porgie burst out, 'I want to see what's on the other side! There's no magic that will get me over, so I've got to find something else!'

Tap, went the switch. 'Something else?'

'If a magic way was in the old books, somebody would have found it already!'

Mr Wickens rose to his feet and stabbed one bony finger accusingly at Porgie. 'Doubt is the mother of damnation!'

Porgie dropped his eyes to the floor and wished he was someplace else.

'I see doubt in you. Doubt is evil, Porgie, *evil*! There are ways permitted to men and ways forbidden. You stand on the brink of the fatal choice. Beware that the Black Man does not come for you as he did for your father before you. Now, bend over!'

Porgie bent. He wished he'd worn a heavier pair of pants.

'Are you ready?'

'Yes, sir,' said Porgie sadly.

Mr Wickens raised the switch over his head. Porgie waited. The switch slammed – but on the desk.

'Straighten up,' Mr Wickens said wearily. He sat down again. 'I've tried pounding things into your head, and I've tried pounding things on your bottom, and one end is as insensitive as the other. Porgie, can't you understand that you aren't supposed to try and find out new things? The Books contain everything there is to know. Year by year what is written in them becomes clearer to us.'

He pointed out the window at the distant towering face of the

Wall that went around the World. 'Don't worry about what is on the other side of that! It may be a place of angels or a place of demons – the Books do not tell us. But no man will know until he is ready for that knowledge. Our broomsticks won't climb that high, our charms aren't strong enough. We need more skill at magic, more understanding of the strange unseen forces that surround us. In my grandfather's time, the best of the broomsticks wouldn't climb over a hundred feet in the air. But Adepts in the Great Tower worked and worked until now, when the clouds are low, we can ride right up among them. Someday we will be able to soar all the way to the top of the Wall – '

'Why not now?' Porgie asked stubbornly. 'With eagles.'

'Because we're not *ready*,' Mr Wickens snapped. 'Look at mind-talk. It was only thirty years ago that the proper incantations were worked out, and even now there are only a few who have the skill to talk across the miles by just thinking out their words. Time, Porgie – it's going to take time. We were placed here to learn the Way, and everything that might divert us from the search is evil. Man can't walk two roads at once. If he tries, he'll split himself in half.'

'Maybe so,' said Porgie. 'But birds get over the Wall, and they don't know any spells. Look, Mr Wickens, if everything is magic, how come magic won't work on everything? Like this, for instance – '

He took a shiny quartz pebble out of his pocket and laid it on the desk.

Nudging it with his finger, he said:

'*Stone fly,*
Rise on high,
Over cloud
And into sky.'

The stone didn't move.

'You see, sir? If words work on broomsticks, they should work on stones, too.'

Mr Wickens stared at the stone. Suddenly it quivered and jumped into the air.

'That's different,' said Porgie. 'You took hold of it with your

mind. Anybody can do that with little things. What I want to know is why the words won't work by themselves.'

'We just don't know enough yet,' said Mr Wickens impatiently. He released the stone and it clicked on the desk-top. 'Every year we learn a little more. Maybe by your children's time we'll find the incantation that will make everything lift.' He sniffed. 'What do you want to make stones fly for, anyhow? You get into enough trouble just throwing them.'

Porgie's brow furrowed. 'There's a difference between *making* a thing do something, like when I lift it with my hand or mind, and putting a spell on it so it does the work by itself, like a broomstick.'

There was a long silence in the study as each thought his own thoughts.

Finally Mr Wickens said, 'I don't want to bring up the unpleasant past, Porgie, but it would be well to remember what happened to your father. His doubts came later than yours – for a while he was my most promising student – but they were just as strong.'

He opened a desk drawer, fumbled in it for a moment, and brought out a sheaf of papers yellow with age. 'This is the paper that damned him – *An Inquiry into Non-Magical Methods of Levitation.* He wrote it to qualify for his Junior Adeptship.' He threw the paper down in front of Porgie as if the touch of it defiled his fingers.

Porgie started to pick it up.

Mr Wickens roared, 'Don't touch it! It contains blasphemy!'

Porgie snatched back his hand. He looked at the top paper and saw a neat sketch of something that looked like a bird – except that it had two sets of wings, one in front and one in back.

Mr Wickens put the papers back in the desk drawer. His disapproving eyes caught and held Porgie's as he said, 'If you want to go the way of your father, none of *us* can stop you.' His voice rose sternly, 'But there is one who can . . . Remember the Black Man, Porgie, for his walk is terrible! There are fires in his eyes and no spell may defend you against him. When he came for your father, there was darkness at noon and a high screaming. When the sunlight came back, they were gone – and it is not good to think where.'

Mr Wickens shook his head as if overcome at the memory and pointed towards the door. 'Think before you act, Porgie. Think well!'

Porgie was thinking as he left, but more about the sketch in his father's paper than about the Black Man.

The orange crate with the two boards across it for wings had looked something like his father's drawing, but appearances had been deceiving. Porgie sat on the back steps of his house feeling sorry for himself and alternately rubbing two tender spots on his anatomy. Though they were at opposite ends, and had different immediate causes, they both grew out of the same thing. His bottom was sore as a result of a liberal application of his uncle's hand. His swollen nose came from an aerial crack-up.

He'd hoisted his laboriously contrived machine to the top of the woodshed and taken a flying leap in it. The expected soaring glide hadn't materialized. Instead, there had been a sickening fall, a splintering crash, a momentary whirling of stars as his nose banged into something hard.

He wished now he hadn't invited Bull Pup to witness his triumph, because the story'd gotten right back to his uncle – with the usual results.

Just to be sure the lesson was pounded home, his uncle had taken away his broomstick for a week – and just so Porgie wouldn't sneak out, he'd put a spell on it before locking it away in the closet.

'Didn't feel like flying, anyway,' Porgie said sulkily to himself, but the pretence wasn't strong enough to cover up the loss. The gang was going over to Red Rocks to chase bats as soon as the sun went down, and he wanted to go along.

He shaded his eyes and looked towards the western Wall as he heard a distant halloo of laughing voices. They were coming in high and fast on their broomsticks. He went back to the woodshed so they wouldn't see him. He was glad he had when they swung low and began to circle the house yelling for him and Bull Pup. They kept hooting and shouting until Homer flew out of his bedroom window to join them.

'Porgie can't come,' he yelled. 'He got licked and Dad took his broom away from him. Come on, gang!'

With a quick looping climb he took the lead and they went hedge-hopping off towards Red Rocks. Bull Pup had been top dog ever since he got his big stick. He'd zoom up to five hundred feet, hang from his broom by his knees and then let go. Down he'd plummet, his arms spread and body arched as if he were making a swan dive – and then, when the ground wasn't more than a hundred feet away, he'd call and his broomstick would arrow down after him and slide between his legs, lifting him up in a great sweeping arc that barely cleared the treetops.

'Showoff!' muttered Porgie and shut the woodshed door on the vanishing stick-riders.

Over on the workbench sat the little model of paper and sticks that had got him into trouble in the first place. He picked it up and gave it a quick shove into the air with his hands. It dived towards the floor and then, as it picked up speed, tilted its nose towards the ceiling and made a graceful loop in the air. Levelling off, it made a sudden veer to the left and crashed against the woodshed wall. A wing splintered.

Porgie went to pick it up. 'Maybe what works for little things doesn't work for big ones,' he thought sourly. The orange crate and the crossed boards had been as close an approximation of the model as he had been able to make. Listlessly he put the broken glider back on his workbench and went outside. Maybe Mr Wickens and his uncle and all the rest were right. Maybe there was only one road to follow.

He did a little thinking about it and came to a conclusion that brought forth a secret grin He'd do it their way – but there wasn't any reason why he couldn't hurry things up a bit. Waiting for his grandchildren to work things out wasn't getting *him* over the Wall.

Tomorrow, after school, he'd start working on his new idea, and this time maybe he'd find the way.

In the kitchen, his uncle and aunt were arguing about him. Porgie paused in the hall that led to the front room and listened.

'Do you think I like to lick the kid? I'm not some kind of an ogre. It hurt me more than it hurt him.'

'I notice you were able to sit down afterwards,' said Aunt Olga dryly.

'Well, what else could I do? Mr Wickens didn't come right out and say so, but he hinted that if Porgie didn't stop mooning around, he might be dropped from school altogether. He's having an unsettling effect on the other kids. Damn it, Olga, I've done everything for that boy I've done for my own son. What do you want me to do, stand back and let him end up like your brother?'

'You leave my brother out of this! No matter what Porgie does, you don't have to beat him. He's still only a little boy.'

There was a loud snort. 'In case you've forgotten, dear, he had his thirteenth birthday last March. He'll be a man pretty soon.'

'Then why don't you have a man-to-man talk with him?'

'Haven't I tried? You know what happens every time. He gets off with those crazy questions and ideas of his and I lose my temper and pretty soon we're back where we started.' He threw up his hands. 'I don't know what to do with him. Maybe that fall he had this afternoon will do some good. I think he had a scare thrown into him that he won't forget for a long time. Where's Bull Pup?'

'Can't you call him Homer? It's bad enough having his friends call him by that horrible name. He went out to Red Rocks with the other kids. They're having a bat hunt or something.'

Porgie's uncle grunted and got up. 'I don't see why that kid can't stay at home at night for a change. I'm going in the front room and read the paper.'

Porgie was already there, flipping the pages of his schoolbooks and looking studious. His uncle settled down in his easy-chair, opened his paper, and lit his pipe. He reached out to put the charred match in the ashtray, and as usual the ashtray wasn't there.

'Damn that woman,' he muttered to himself and raised his voice: 'Porgie.'

'Yes, Uncle Veryl?'

'Bring me an ashtray from the kitchen, will you please? Your aunt has them all out there again.'

'Sure thing,' said Porgie and shut his eyes. He thought of the kitchen until a picture of it was crystal-clear in his mind. The beaten copper ashtray was sitting beside the sink where his aunt

had left it after she had washed it out. He squinted the little eye inside his head, stared hard at the copper bowl, and whispered:

'Ashtray fly,
Follow eye.'

Simultaneously he lifted with his mind. The ashtray quivered and rose slowly into the air.

Keeping it firmly suspended, Porgie quickly visualized the kitchen door and the hallway and drifted it through.

'Porgie!' came his uncle's angry voice.

Porgie jumped, and there was a crash in the hallway outside as the bowl was suddenly released and crashed to the floor.

'How many times have I told you not to levitate around the house? If it's too much work to go out to the kitchen, tell me, and I'll do it myself.'

'I was just practising,' mumbled Porgie defensively.

'Well, practise outside. You've got the walls all scratched up from banging things against them. You know you shouldn't fool around with telekinesis outside sight range until you've mastered full visualization. Now go and get me that ashtray.'

Crestfallen, Porgie went out the door into the hall. When he saw where the ashtray had fallen, he gave a silent whistle. Instead of coming down the centre of the hall, it had been three feet off course and heading directly for the hall table when he let it fall. In another second, it would have smashed into his aunt's precious black alabaster vase.

'Here it is, Uncle,' he said, taking it into the front room. 'I'm sorry.'

His uncle looked at his unhappy face, sighed, and reached out and tousled his head affectionately.

'Buck up, Porgie. I'm sorry I had to paddle you this afternoon. It was for your own good. Your aunt and I don't want you to get into any serious trouble. You know what folks think about machines.' He screwed up his face as if he'd said a dirty word. 'Now, back to your books – we'll forget all about what happened today. Just remember this, Porgie: if there's anything you want to know, don't go fooling around on your own. Come and ask me, and we'll have a man-to-man talk.'

Porgie brightened. 'There's something I have been wondering about.'

'Yes?' said his uncle encouragingly.

'How many eagles would it take to lift a fellow high enough to see what was on the other side of the Wall?'

Uncle Veryl counted to ten – very slowly.

The next day Porgie went to work on his new project. As soon as school was out, he went over to the Public Library and climbed upstairs to the main circulation room.

'Little boys are not allowed in this section,' the librarian said. 'The children's division is downstairs.'

'But I need a book,' protested Porgie. 'A book on how to fly.'

'This section is only for adults.'

Porgie did some fast thinking. 'My uncle can take books from here, can't he?'

'I suppose so.'

'And he could send me over to get something for him, couldn't he?'

The librarian nodded reluctantly.

Porgie prided himself on never lying. If the librarian chose to misconstrue his questions, it was her fault, not his.

'Well, then,' he said, 'do you have any books on how to make things fly in the air?'

'What kind of things?'

'Things like birds.'

'Birds don't have to be made to fly. They're born that way.'

'I don't mean real birds,' said Porgie. 'I mean birds you make.'

'Oh, Animation. Just a second, let me visualize.' She shut her eyes and a card catalogue across the room opened and shut one drawer after another. 'Ah, that might be what he's looking for,' she murmured after a moment, and concentrated again. A large brass-bound book came flying out of the stacks and came to rest on the desk in front of her. She pulled the index card out of the pocket in the back and shoved it towards Porgie. 'Sign your uncle's name here.'

He did and then, hugging the book to his chest, got out of the library as quickly as he could.

By the time Porgie had worked three quarters of the way through the book, he was about ready to give up in despair. It was all grown-up magic. Each set of instructions he ran into either used words he didn't understand or called for unobtainable ingredients like powdered unicorn horns and the blood of red-headed female virgins.

He didn't know what a virgin was – all his uncle's encyclopedia had to say on the subject was that they were the only ones who could ride unicorns – but there was a red-head by the name of Dorothy Boggs who lived down the road a piece. He had a feeling, however, that neither she nor her family would take kindly to a request for two quarts of blood, so he kept on searching through the book. Almost at the very end he found a set of instructions he thought he could follow.

It took him two days to get the ingredients together. The only thing that gave him trouble was finding a toad – the rest of the stuff, though mostly nasty and odoriferous, was obtained with little difficulty. The date and exact time of the experiment was important and he surprised Mr Wickens by taking a sudden interest in his Practical Astrology course.

At last, after laborious computations, he decided everything was ready.

Late that night he slipped out of bed, opened his bedroom door a crack, and listened. Except for the usual night noises and resonant snores from Uncle Veryl's room, the house was silent. He shut the door carefully and got his broomstick from the closet – Uncle Veryl had relented about that week's punishment.

Silently he drifted out through his open window and across the yard to the woodshed.

Once inside, he checked carefully to see that all the windows were covered. Then he lit a candle. He pulled a loose floorboard up and removed the book and his assembled ingredients. Quickly he made the initial preparations.

First there was the matter of moulding the clay he had taken from the graveyard into a rough semblance of a bird. Then, after sticking several white feathers obtained from last Sunday's chicken into each side of the figure to make wings, he anointed it with a noxious mixture he had prepared in advance.

The moon was just setting behind the Wall when he began the incantation. Candlelight flickered on the pages of the old book as he slowly and carefully pronounced the difficult words.

When it came time for the business with the toad, he almost didn't have the heart to go through with it; but he steeled himself and did what was necessary. Then, wincing, he jabbed his forefinger with a pin and slowly dropped the requisite three drops of blood down on the crude clay figure. He whispered:

'*Clay of graveyard,*
White cock's feather,
Eye of toad,
Rise together!'

Breathlessly he waited. He seemed to be in the middle of a circle of silence. The wind in the trees outside had stopped and there was only the sound of his own quick breathing. As the candlelight rippled, the clay figure seemed to quiver slightly as if it were hunching for flight.

Porgie bent closer, tense with anticipation. In his mind's eye, he saw himself building a giant bird with wings powerful enough to lift him over the Wall around the World. Swooping low over the schoolhouse during recess, he would wave his hands in a condescending gesture of farewell, and then, as the kids hopped on their sticks and tried to follow him, he would rise higher and higher until he had passed the ceiling of their brooms and left them circling impotently below him. At last he would sweep over the Wall with hundreds of feet to spare, over it and then down – down into the great unknown.

The candle flame stopped flickering and stood steady and clear. Beside it, the clay bird squatted, lifeless and motionless.

Minutes ticked by and Porgie gradually saw it for what it was – a smelly clod of dirt with a few feathers tucked in it. There were tears in his eyes as he picked up the body of the dead toad and said softly, 'I'm sorry.'

When he came in from burying it, he grasped the image of the clay bird tightly in his mind and sent it swinging angrily around the shed. Feathers fluttered behind it as it flew faster and faster until in disgust he released it and let it smash into the rough boards of

the wall. It crumbled into a pile of foul-smelling trash and fell to the floor. He stirred it with his toe, hurt, angry, confused.

His broken glider still stood where he had left it on the far end of his workbench. He went over and picked it up.

'At least you flew by yourself,' he said, 'and I didn't have to kill any poor little toads to make you.'

Then he juggled it in his hand, feeling its weight, and began to wonder. It had occurred to him that maybe the wooden wings on his big orange-box glider had been too heavy.

'Maybe if I could get some long, thin poles,' he thought, 'and some cloth to put across the wings . . .'

During the next three months there was room in Porgie's mind for only one thing – the machine he was building in the roomy old cave at the top of the long hill on the other side of Arnett's grove. As a result, he kept slipping further and further behind at school.

Things at home weren't too pleasant, either – Bull Pup felt it was his duty to keep his parents fully informed of Porgie's shortcomings. Porgie didn't care, though. He was too busy. Every minute he could steal was spent in either collecting materials or putting them together.

The afternoon the machine was finally finished, he could hardly tear himself away from it long enough to go home for dinner. He was barely able to choke down his food, and didn't even wait for dessert.

He sat on the grass in front of the cave, waiting for darkness. Below, little twinkling lights marked the villages that stretched across the plain for a full forty miles. Enclosing them like encircling arms stretched the dark and forbidding mass of the Wall. No matter where he looked, it stood high against the night. He followed its curve with his eyes until he had turned completely around, and then he shook his fist at it.

Patting the ungainly mass of the machine that rested on the grass beside him, he whispered fiercely, 'I'll get over you yet. Old *Eagle* here will take me!'

Old *Eagle* was an awkward, boxkite-like affair; but to Porgie she was a thing of beauty. She had an uncovered fuselage

composed of four long poles braced together to make a rectangular frame, at each end of which was fastened a large wing.

When it was dark enough, he climbed into the open frame and reached down and grabbed hold of the two lower members. Grunting, he lifted until the two upper ones rested under his armpits. There was padding there to support his weight comfortably once he was airborne. The bottom of the machine was level with his waist and the rest of him hung free. According to his thinking, he should be able to control his flight by swinging his legs. If he swung forward, the shifting weight should tilt the nose down; if he swung back, it should go up.

There was only one way to find out if his ifs were right. The *Eagle* was a heavy contraption. He walked awkwardly to the top of the hill, the cords standing out on his neck. He was scared as he looked down the long steep slope that stretched out before him – so scared that he was having trouble breathing. He swallowed twice in a vain attempt to moisten his dry throat, and then lunged forward, fighting desperately to keep his balance as his wobbling steps gradually picked up speed.

Faster he went, and faster, his steps turning into leaps as the wing surfaces gradually took hold. His toes scraped through the long grass and then they were dangling in free air.

He was aloft.

Not daring to even move his head, he slanted his eyes down and to the left. The earth was slipping rapidly by a dozen feet below him. Slowly and cautiously, he swung his feet back. As the weight shifted, the nose of the glider rose. Up, up he went, until he felt a sudden slowing down and a clumsiness of motion. Almost instinctively, he leaned forward again, pointing the nose down in a swift dip to regain flying speed.

By the time he reached the bottom of the hill, he was a hundred and fifty feet up. Experimentally, he swung his feet a little to the left. The glider dipped slightly and turned. Soaring over a clump of trees, he felt a sudden lifting as an updraught caught him.

Up he went – ten, twenty, thirty feet – and then slowly began to settle again.

The landing wasn't easy. More by luck than by skill he came down in the long grass of the meadow with no more damage than a few bruises. He sat for a moment and rested, his head spinning with excitement. He had flown like a bird, without his stick, without uttering a word. There *were* other ways than magic!

His elation suddenly faded with the realization that, while gliding down was fun, the way over the Wall was *up*. Also, and of more immediate importance, he was half a mile from the cave with a contraption so heavy and unwieldy that he could never hope to haul it all the way back up the hill by himself. If he didn't get it out of sight by morning, there was going to be trouble, serious trouble. People took an unpleasant view of machines and those who built them.

Broomsticks, he decided, had certain advantages, after all. They might not fly very high, but at least you didn't have to walk home from a ride.

'If I just had a great big broomstick,' he thought, 'I could lift the *Eagle* up with it and fly her home.'

He jumped to his feet. It might work!

He ran back up the hill as fast as he could and finally, very much out of breath, reached the entrance of the cave. Without waiting to get back his wind, he jumped on his stick and flew down to the stranded glider.

Five minutes later, he stepped back and said:

'*Broomstick fly,*
Rise on high,
Over cloud
And into sky.'

It didn't fly. It couldn't. Porgie had lashed it to the framework of the *Eagle*. When he grabbed hold of the machine and lifted, nine-tenths of its weight was gone, cancelled out by the broomstick's lifting power.

He towed it back up the hill and shoved it into the cave. Then he looked uneasily at the sky. It was later than he had thought. He should be home and in bed – but when he thought of the feeling of power he had had in his flight, he couldn't resist hauling the *Eagle* back out again.

After checking the broomstick to be sure it was still fastened tightly to the frame, he went swooping down the hill again. This time when he hit the thermal over the clump of trees he was pushed up a hundred feet before he lost it. He curved through the darkness until he found it again and then circled tightly within it.

Higher he went and higher, higher than any broomstick had ever gone!

When he started to head back, though, he didn't have such an easy time of it. Twice he was caught in downdraughts that almost grounded him before he was able to break loose from the tugging winds. Only the lifting power of his broomstick enabled him to stay aloft. With it bearing most of the load, the *Eagle* was so light that it took just a flutter of air to sweep her up again.

He landed the glider a stone's throw from the mouth of his cave.

'Tomorrow night!' he thought exultantly as he unleashed his broomstick. 'Tomorrow night!'

There was a tomorrow night, and many nights after that. The *Eagle* was sensitive to every updraught, and with care he found he could remain aloft for hours, riding from thermal to thermal. It was hard to keep his secret, hard to keep from shouting the news, but he had to. He slipped out at night to practise, slipping back in again before sunrise to get what sleep he could.

He circled the day of his fourteenth birthday in red and waited. He had a reason for waiting.

In the World within the Wall, fourteenth birthdays marked the boundary between the little and the big, between being a big child and a small man. Most important, they marked the time when one was taken to the Great Tower where the Adepts lived and given a full-sized broomstick powered by the most potent of spells, sticks that would climb to a full six hundred feet, twice the height that could be reached by the smaller ones the youngsters rode.

Porgie needed a man-sized stick, needed that extra power, for he had found that only the strongest of updraughts would lift him past the three-hundred-foot ceiling where the lifting power of his little broomstick gave out. He had to get up almost as high as the Wall before he could make it across the wide expanse of flat plain that separated him from the box canyon where the great wind waited.

So he counted the slowly passing days and practised flying during the rapidly passing nights.

The afternoon of his fourteenth birthday found Porgie sitting on the front steps expectantly, dressed in his best and waiting for his uncle to come out of the house. Bull Pup came out and sat down beside him.

'The gang's having a coven up on top of old Baldy tonight,' he said. 'Too bad you can't come.'

'I can go if I want to,' said Porgie.

'How?' said Bull Pup and snickered. 'You going to grow wings and fly? Old Baldy's five hundred feet up and your kid stick won't lift you that high.'

'Today's my birthday.'

'You think you're going to get a new stick?'

Porgie nodded.

'Well, you ain't. I heard Mom and Dad talking. Dad's mad because you flunked Alchemy. He said you had to be taught a lesson.'

Porgie felt sick inside, but he wouldn't let Bull Pup have the satisfaction of knowing it.

'I don't care,' he said. 'I'll go to the coven if I want to. You just wait and see.'

Bull Pup was laughing when he hopped on his stick and took off down the street. Porgie waited an hour, but his uncle didn't come out.

He went into the house. Nobody said anything about his new broomstick until after supper. Then his uncle called him into the living-room and told him he wasn't getting it.

'But, Uncle Veryl, you promised!'

'It was a conditional promise, Porgie. There was a big if attached to it. Do you remember what it was?'

Porgie looked down at the floor and scuffed one toe on the worn carpet. 'I tried.'

'Did you really, son?' His uncle's eyes were stern but compassionate. 'Were you trying when you fell asleep in school today? I've tried talking with you and I've tried whipping you and neither seems to work. Maybe this will. Now you run upstairs and get started on your studies. When you can show me that your marks

are improving, we'll talk about getting you a new broomstick. Until then, the old one will have to do.'

Porgie knew that he was too big to cry, but when he got to his room he couldn't help it. He was stretched out on his bed with his face buried in the pillows when he heard a hiss from the window. He looked up to see Bull Pup sitting on his stick, grinning malevolently at him.

'What do you want?' sniffed Porgie.

'Only little kids cry,' said Bull Pup.

'I wasn't crying. I got a cold.'

'I just saw Mr Wickens. He was coming out of that old cave back of Arnett's grove. He's going to get the Black Man, I'll bet.'

'I don't know anything about that old cave,' said Porgie, sitting bolt upright on his bed.

'Oh yes, you do. I followed you up there one day. You got a machine in there. I told Mr Wickens and he gave me a quarter. He was real interested.'

Porgie jumped from his bed and ran towards the window, his face red and his fists doubled. 'I'll fix you!'

Bull Pup backed his broomstick just out of Porgie's reach, and then stuck his thumbs in his ears and waggled his fingers. When Porgie started to throw things, he gave a final taunt and swooped away towards old Baldy and the coven.

Porgie's uncle was just about to go out in the kitchen and fix himself a sandwich when the doorbell rang. Grumbling, he went out into the front hall. Mr Wickens was at the door. He came into the house and stood blinking in the light. He seemed uncertain as to just how to begin.

'I've got bad news for you,' he said finally. 'It's about Porgie. Is your wife still up?'

Porgie's uncle nodded anxiously.

'She'd better hear this too.'

Aunt Olga put down her knitting when they came into the living-room.

'You're out late, Mr Wickens.'

'It's not of my own choosing.'

'Porgie's done something again,' said his uncle.

Aunt Olga sighed. 'What is it this time?'

Mr Wickens hesitated, cleared his throat, and finally spoke in a low, hushed voice: 'Porgie's built a machine. The Black Man told me. He's coming after the boy tonight.'

Uncle Veryl dashed up the stairs to find Porgie. He wasn't in his room.

Aunt Olga just sat in her chair and cried shrilly.

The moon stood high and silver-lit the whole countryside. Porgie could make out the world far below him almost as if it were day. Miles to his left, he saw the little flickering fires on top of old Baldy where the kids were holding their coven. He fought an impulse and then succumbed to it. He circled the *Eagle* over a clump of trees until the strong rising currents lifted him almost to the height of the Wall. Then he twisted his body and banked over towards the distant red glowing fires.

Minutes later, he went silently over them at eight hundred feet, feeling out the air currents around the rocks. There was a sharp downdraught on the far side of Baldy that dropped him suddenly when he glided into it, but he made a quick turn and found untroubled air before he fell too far. On the other side, towards the box canyon, he found what he wanted, a strong, rising current that seemed to have no upward limits.

He fixed its location carefully in his mind and then began to circle down towards the coven. Soon he was close enough to make out individual forms sitting silently around their little fires.

'Hey, Bull Pup,' he yelled at the top of his lungs.

A stocky figure jumped to its feet and looked wildly around for the source of the ghostly voice.

'Up here!'

Porgie reached in his pocket, pulled out a small pebble and chucked it down. It cracked against a shelf of rock four feet from Bull Pup. Porgie's cousin let out a howl of fear. The rest of the kids jumped up and reared back their heads at the night sky, their eyes blinded by firelight.

'I told you I could come to the coven if I wanted to,' yelled Porgie, 'but now I don't. I don't have any time for kid stuff; I'm going over the Wall!'

During his last pass over the plateau he wasn't more than thirty

feet up. As he leaned over, his face was clearly visible in the firelight.

Placing one thumb to his nose, he waggled his fingers and chanted, 'Nyah, nyah, nyah, you can't catch me!'

His feet were almost scraping the ground as he glided over the drop-off. There was an anxious second of waiting and then he felt the sure, steady thrust of the up-current against his wings.

He looked back. The gang was milling around, trying to figure out what had happened. There was an angry shout of command from Bull Pup, and after a moment of confused hesitation they all made for their brooms and swooped up into the air.

Porgie mentally gauged his altitude and then relaxed. He was almost at their ceiling and would be above it before they reached him.

He flattened out his glide and yelled, 'Come on up! Only little kids play that low!'

Bull Pup's stick wouldn't rise any higher. He circled impotently, shaking his fist at the machine that rode serenely above him.

'You just wait,' he yelled. 'You can't stay up there all night. You got to come down some time, and when you do, we'll be waiting for you.'

'Nyah, nyah, nyah,' chanted Porgie and mounted higher into the moonlit night.

When the updraught gave out, he wasn't as high as he wanted to be, but there wasn't anything he could do about it. He turned and started a flat glide across the level plain towards the box canyon. He wished now that he had left Bull Pup and the other kids alone. They were following along below him. If he dropped down to their level before the canyon winds caught him, he was in trouble.

He tried to flatten his glide still more, but instead of saving altitude, he went into a stall that dropped him a hundred feet before he was able to regain control. He saw now that he could never make it without dropping to Bull Pup's level.

Bull Pup saw it too, and let out an exultant yell: 'Just you wait! You're going to get it good!'

Porgie peered over the side into the darkness where his cousin rode, his pug face gleaming palely in the moonlight.

'Leave him alone, gang,' Bull Pup shouted. 'He's mine!'

The rest pulled back and circled slowly as the *Eagle* glided quietly down among them. Bull Pup darted in and rode right alongside Porgie.

He pointed savagely towards the ground: 'Go down or I'll knock you down!'

Porgie kicked at him, almost upsetting his machine. He wasn't fast enough. Bull Pup dodged easily. He made a wide circle and came back, reaching out and grabbing the far end of the *Eagle*'s front wing. Slowly and maliciously, he began to jerk it up and down, twisting violently as he did so.

'Get down,' he yelled, 'or I'll break it off!'

Porgie almost lost his head as the wrenching threatened to throw him out of control.

'Let go!' he screamed, his voice cracking.

Bull Pup's face had a strange excited look on it as he gave the wing another jerk. The rest of the boys were becoming frightened as they saw what was happening.

'Quit it, Bull Pup!' somebody called. 'Do you want to kill him?'

'Shut up or you'll get a dose of the same!'

Porgie fought to clear his head. His broomstick was tied to the frame of the *Eagle* so securely that he would never be able to free it in time to save himself. He stared into the darkness until he caught the picture of Bull Pup's broomstick sharply in his mind. He'd never tried to handle anything that big before, but it was that or nothing.

Tensing suddenly, he clamped his mind down on the picture and held it hard. He knew that words didn't help, but he uttered them anyway:

'Broomstick stop,
Flip and flop!'

There was a sharp tearing pain in his head. He gritted his teeth and held on, fighting desperately against the red haze that threatened to swallow him. Suddenly there was a half-startled, half-frightened squawk from his left wing-tip, and Bull Pup's stick jerked to an abrupt halt, gyrating so madly that its rider could hardly hang on.

'All right, the rest of you,' screamed Porgie. 'Get going or I'll do the same thing to you!'

They got, arcing away in terrified disorder. Porgie watched as they formed a frightened semicircle around the blubbering Bull Pup. With a sigh of relief, he let go with his mind.

As he left them behind in the night, he turned his head back and yelled weakly, 'Nyah, nyah, nyah, you can't catch me!'

He was only fifty feet off the ground when he glided into the far end of the box canyon and was suddenly caught by the strong updraught. As he soared in a tight spiral, he slumped down against the arm-rests, his whole body shaking in delayed reaction.

The lashings that held the front wing to the frame were dangerously loose-from the manhandling they had received. One more tug and the whole wing might have twisted back, dumping him down on the sharp rocks below. Shudders ran through the *Eagle* as the supports shook in their loose bonds. He clamped both hands around the place where the rear wing spar crossed the frame and tried to steady it.

He felt his stick's lifting power give out at three hundred feet. The *Eagle* felt clumsy and heavy, but the current was still enough to carry him slowly upwards. Foot by foot he rose towards the top of the Wall, losing a precious hundred feet once when he spiralled out of the updraught and had to circle to find it. A wisp of cloud curled down from the top of the Wall and he felt a moment of panic as he climbed into it.

Momentarily, there was no left or right or up or down. Only damp whiteness. He had the feeling that the *Eagle* was falling out of control; but he kept steady, relying on the feel for the air he had gotten during his many practice flights.

The lashings had loosened more. The full strength of his hands wasn't enough to keep the wing from shuddering and trembling. He struggled resolutely to maintain control of ship and self against the strong temptation to lean forward and throw the *Eagle* into a shallow dive that would take him back to normalcy and safety.

He was almost at the end of his resolution when with dramatic suddenness he glided out of the cloud into the clear moon-touched night. The up-current under him seemed to have lessened. He banked in a gentle arc, trying to find the centre of it again.

As he turned, he became aware of something strange, something different, something almost frightening. For the first time in his life, there was no Wall to block his vision, no vast black line stretching through the night.

He was above it!

There was no time for looking. With a loud *ping*, one of the lashings parted and the leading edge of the front wing flapped violently. The glider began to pitch and yaw, threatening to nose over into a plummeting dive. He fought for mastery, swinging his legs like desperate pendulums as he tried to correct the erratic side swings that threatened to throw him out of control. As he fought, he headed for the Wall.

If he were to fall, it would be on the other side. At least he would cheat old Mr Wickens and the Black Man.

Now he was directly over the Wall. It stretched like a wide road underneath him, its smooth top black and shining in the moonlight. Acting on quick impulse, he threw his body savagely forward and to the right. The ungainly machine dipped abruptly and dived towards the black surface beneath it.

Eighty feet, seventy, sixty, fifty – he had no room to manoeuvre, there would be no second chance – thirty, twenty –

He threw his weight back, jerking the nose of the *Eagle* suddenly up. For a precious second the wings held, there was a sharp breaking of his fall; then, with a loud, cracking noise, the front wing buckled back in his face. There was a moment of blind whirling fall and a splintering crash that threw him into darkness.

Slowly, groggily, Porgie pulled himself up out of the broken wreckage. The *Eagle* had made her last flight. She perched precariously, so near the outside edge of the Wall that part of her rear wing stretched out over nothingness.

Porgie crawled cautiously across the slippery wet surface of the top of the Wall until he reached the centre. There he crouched down to wait for morning. He was exhausted, his body so drained of energy that in spite of himself he kept slipping into an uneasy sleep.

Each time he did, he'd struggle back to consciousness, trying to escape the nightmare figures that scampered through his brain. He was falling, pursued by wheeling, batlike figures with pug faces.

He was in a tiny room and the walls were inching in towards him and he could hear the voice of Bull Pup in the distance chanting, 'You're going to get it.' And then the room turned into a long, black corridor and he was running. Mr Wickens was close behind him, and he had long, sharp teeth and he kept yelling, 'Porgie! Porgie!'

He shuddered back to wakefulness, crawled to the far edge of the Wall and, hanging his head over, tried to look down at the Outside World. The clouds had boiled up and there was nothing underneath him but grey blankness hiding the sheer thousand-foot drop. He crawled back to his old spot and looked towards the east, praying for the first sign of dawn. There was only blackness there.

He started to doze off again and once more he heard the voice: 'Porgie! Porgie!'

He opened his eyes and sat up. The voice was still calling, even though he was awake. It seemed to be coming from high up and far away.

It came closer, closer, and suddenly he saw it in the darkness – a black figure wheeling over the Wall like a giant crow. Down it came, nearer and nearer, a man in black with arms outstretched and long fingers hooked like talons!

Porgie scrambled to his feet and ran, his feet skidding on the slippery surface. He looked back over his shoulder. The black figure was almost on top of him. Porgie dodged desperately and slipped.

He felt himself shoot across the slippery surface towards the edge of the Wall. He clawed, scrabbling for purchase. He couldn't stop. One moment he felt wet coldness slipping away under him; the next, nothingness as he shot out into the dark and empty air.

He spun slowly as he fell. First the clouds were under him and then they tipped and the star-flecked sky took their places. He felt cradled, suspended in time. There was no terror. There was nothing.

Nothing – until suddenly the sky above him was blotted out by a plummeting black figure that swooped down on him, hawk-like and horrible.

Porgie kicked wildly. One foot slammed into something solid and for an instant he was free. Then strong arms circled him from

behind and he was jerked out of the nothingness into a world of falling and fear.

There was a sudden strain on his chest and then he felt himself being lifted. He was set down gently on the top of the Wall.

He stood defiant, head erect, and faced the black figure.

'I won't go back. You can't make me go back.'

'You don't have to go back, Porgie.'

He couldn't see the hooded face, but the voice sounded strangely familiar.

'You've earned your right to see what's on the other side,' it said. Then the figure laughed and threw back the hood that partially covered its face.

In the bright moonlight, Porgie saw Mr Wickens!

The schoolmaster nodded cheerfully. 'Yes, Porgie, I'm the Black Man. Bit of a shock, isn't it?'

Porgie sat down suddenly.

'I'm from the Outside,' said Mr Wickens, seating himself carefully on the slick black surface. 'I guess you could call me a sort of observer.'

Porgie's spinning mind couldn't catch up with the new ideas that were being thrown at him. 'Observer?' he said uncomprehendingly. 'Outside?'

'Outside. That's where you'll be spending your next few years. I don't think you'll find life better there, and I don't think you'll find it worse. It'll be different, though, I can guarantee that.' He chuckled. 'Do you remember what I said to you in my office that day – that Man can't follow two paths at once, that Mind and Nature are bound to conflict? That's true, but it's also false. You can have both, but it takes two worlds to do it.

'Outside, where you're going, is the world of the machines. It's a good world, too. But the men who live there saw a long time ago that they were paying a price for it; that control over Nature meant that the forces of the Mind were neglected, for the machine is a thing of logic and reason, but miracles aren't. Not yet. So they built the Wall and they placed people within it and gave them such books and such laws as would ensure development of the powers of the Mind. At least they hoped it would work that way – and it did.'

'But – but why the Wall?' asked Porgie.

'Because their guess was right. There is magic.' He pulled a bunch of keys from his pocket. 'Lift it, Porgie.'

Porgie stared at it until he had the picture in his mind and then let his mind take hold, pulling with invisible hands until the keys hung high in the air. Then he dropped them back into Mr Wickens' hand.

'What was that for?'

'Outsiders can't do that,' said the schoolmaster. 'And they can't do conscious telepathy – what you call mind-talk – either. They can't because they really don't believe such things can be done. The people inside the Wall do, for they live in an atmosphere of magic. But once these things are worked out, and become simply a matter of training and method, then the ritual, the mumbo-jumbo, the deeply ingrained belief in the existence of supernatural forces will be no longer necessary.

'These phenomena will be only tools that anybody can be trained to use, and the crutches can be thrown away. Then the Wall will come tumbling down. But until then –' he stopped and frowned in mock severity – 'there will always be a Black Man around to see that the people inside don't split themselves up the middle trying to walk down two roads at once.'

There was a lingering doubt in Porgie's eyes. 'But you flew without a machine.'

The Black Man opened his cloak and displayed a small, gleaming disk that was strapped to his chest. He tapped it. 'A machine, Porgie. A machine, just like your glider, only of a different sort and much better. It's almost as good as levitation. Mind and Nature . . . magic and science . . . they'll get together eventually.'

He wrapped his cloak about him again. 'It's cold up here. Shall we go? Tomorrow is time enough to find out what is Outside the Wall that goes around the World.'

'Can't we wait until the clouds lift?' asked Porgie wistfully. 'I'd sort of like to see it for the first time from up here.'

'We could,' said Mr Wickens, 'but there is somebody you haven't seen for a long time waiting for you down there. If we stay up here, he'll be worried.'

Porgie looked up blankly. 'I don't know anybody Outside. I –'

He stopped suddenly. He felt as if he were about to explode. 'Not my father!'

'Who else? He came out the easy way. Come, now, let's go and show him what kind of man his son has grown up to be. Are you ready?'

'I'm ready,' said Porgie.

'Then help me drag your contraption over to the other side of the Wall so we can drop it inside. When the folk find the wreckage in the morning, they'll know what the Black Man does to those who build machines instead of tending to their proper business. It should have a salutary effect on Bull Pup and the others.'

He walked over to the wreckage of the *Eagle* and began to tug at it.

'Wait,' said Porgie. 'Let me.' He stared at the broken glider until his eyes began to burn. Then he gripped and pulled.

Slowly, with an increasing consciousness of mastery, he lifted until the glider floated free and was rocking gently in the slight breeze that rippled across the top of the great Wall. Then, with a sudden shove, he swung it far out over the abyss and released it.

The two stood silently, side by side, watching the *Eagle* pitch downwards on broken wings. When it was lost in the darkness below, Mr Wickens took Porgie in his strong arms and stepped confidently to the edge of the Wall.

'Wait a second,' said Porgie, remembering a day in the schoolmaster's study and a switch that had come floating obediently down through the air. 'If you're from Outside, how come you can do lifting?'

Mr Wickens grinned. 'Oh, I was born Inside. I went over the Wall for the first time when I was just a little older than you are now.'

'In a glider?' asked Porgie.

'No,' said the Black Man, his face perfectly sober. 'I went out and caught myself a half-dozen eagles.'

Protected Species

H. B. FYFE

The yellow star, of which Torang was the second planet, shone hotly down on the group of men viewing the half-built dam from the heights above. At a range of eighty million miles the effect was quite Terran, the star being somewhat smaller than Sol.

For Jeff Otis, fresh from a hop through space from the extra-bright star that was the other component of the binary system, the heat was enervating. The shorts and light shirt supplied him by the planet coordinator were soaked with perspiration. He mopped his forehead and turned to his host.

'Very nice job, Finchley,' he complimented. 'It's easy to see you have things well in hand here.'

Finchley grinned sparingly. He had a broad, hard, flat face with tight lips and mere slits of blue eyes. Otis had been trying ever since the previous morning to catch a revealing expression on it.

He was uneasily aware that his own features were too frank and open for an inspector of colonial installations. For one thing, he had too many lines and hollows in his face, a result of being chronically underweight from space-hopping among the sixteen planets of the binary system.

Otis noticed that Finchley's aides were eyeing him furtively.

'Yes, Finchley,' he repeated to break the little silence, 'you're doing very well on the hydro-electric end. When are you going to show me the capital city you're laying out?'

'We can fly over there now,' answered Finchley. 'We have tentative boundaries laid out below those pre-colony ruins we saw from the 'copter.'

'Oh, yes. You know, I meant to remark as we flew over that they looked a good deal like similar remnants on some of the other planets.'

He caught himself as Finchley's thin lips tightened a trifle more. The coordinator was obviously trying to be patient and polite to an official from whom he hoped to get a good report, but Otis could see he would much rather be going about his business of building up the colony.

He could hardly blame Finchley, he decided. It was the fifth planetary system Terrans had found in their expansion into space, and there would be bigger jobs ahead for a man with a record of successful accomplishments. Civilization was reaching out to the stars at last. Otis supposed that he, too, was some sort of pioneer, although he usually was too busy to feel like one.

'Well, I'll show you some photos later,' he said. 'Right now, we – Say, why all that jet-burning down there?'

In the gorge below, men had dropped their tools and seemed to be charging towards a common focal point. Excited yells carried thinly up the cliffs.

'Ape hunt, probably,' guessed one of Finchley's engineers.

'Ape?' asked Otis, surprised.

'Not exactly,' corrected Finchley patiently. 'That's common slang for what we mention in reports as Torangs. They look a little like big, skinny, grey apes; but they're the only life large enough to name after the planet.'

Otis stared down into the gorge. Most of the running men had given up and were straggling back to their work. Two or three, brandishing pistols, continued running and disappeared around a bend.

'Never catch him now,' commented Finchley's pilot.

'Do you just let them go running off whenever they feel like it?' Otis inquired.

Finchley met his curious gaze stolidly.

'I'm in favour of anything that will break the monotony, Mr Otis. We have a problem of morale, you know. This planet is a key colony, and I like to keep the work going smoothly.'

'Yes, I suppose there isn't much for recreation yet.'

'Exactly. I don't see the sport in it myself but I let them. We're up to schedule.'

'Ahead, if anything,' Otis placated him. 'Well, now, about the city?'

Finchley led the way to the helicopter. The pilot and Otis waited while he had a final word with his engineers, then they all climbed in and were off.

Later, hovering over the network of crude roads being levelled by Finchley's bulldozers, Otis admitted aloud that the location was well-chosen. It lay along a long, narrow bay that thrust in from the distant ocean to gather the waters of the same river that was being dammed some miles upstream.

'Those cliffs over there,' Finchley pointed out, 'were raised up since the end of whatever civilization used to be here – so my geologist tells me. We can fly back that way, and you can see how the ancient city was once at the head of the bay.'

The pilot climbed and headed over the cliffs. Otis saw that these formed the edge of a plateau. At one point their continuity was marred by a deep gouge.

'Where the river ran thousands of years ago,' Finchley explained.

They reached a point from which the outlines of the ruined city were easily discerned. From the air, Otis knew, they were undoubtedly plainer than if he had been among them.

'Must have been a pretty large place,' he remarked. 'Any idea what sort of beings built it or what happened to them?'

'Haven't had time for that yet,' Finchley said. 'Some boys from the exploration staff poke around in there every so often. Best current theory seems to be that it belonged to the Torangs.'

'The *animals* they were hunting before?' asked Otis.

'Might be. Can't say for sure, but the diggers found signs the city took more of a punch than just an earthquake. Claim they found too much evidence of fires, exploded missiles, and warfare in general – other places as well as here. So . . . we've been guessing the Torangs are degenerated descendants of the survivors of some interplanetary brawl.'

Otis considered that.

'Sounds plausible,' he admitted, 'but you ought to do something to make sure you are right.'

'Why?'

'If it *is* the case, you'll have to stop your men from hunting them; degenerated or not, the Colonial Commission has regulations about contact with any local inhabitants.'

Finchley turned his head to scowl at Otis, and controlled himself with an obvious effort.

'Those *apes*?' he demanded.

'Well, how can you tell? Ever try to contact them?'

'Yes! At first, that is; before we figured them for animals.'

'And?'

'Couldn't get near one!' Finchley declared heatedly. 'If they had any sort of half-intelligent culture, wouldn't they let us make *some* sort of contact?'

'Offhand,' admitted Otis, 'I should think so. How about setting down a few minutes? I'd like a look at the ruins.'

Finchley glared at his wrist watch, but directed the pilot to land in a cleared spot. The young man brought them down neatly and the two officials alighted.

Otis, glancing around, saw where the archaeologists had been digging. They had left their implements stacked casually at the site – the air was dry up here and who was there to steal a shovel?

He left Finchley and strolled around a mound of dirt that had been cleared away from an entrance to one of the buildings. The latter had been built of stone, or at least faced with it. A peep into the dim excavation led him to believe there had been a steel framework, but the whole affair had been collapsed as if by an explosion.

He walked a little way farther and reached a section of presumably taller buildings where the stone ruins thrust above the sandy surface. After he had wandered through one or two arched openings that seemed to have been windows, he understood why the explorers had chosen to dig for their information. If any covering or decoration had ever graced the walls, it had long since been weathered off. As for ceiling or roof, nothing remained.

'Must have been a highly developed civilization just the same,' he muttered.

A movement at one of the shadowed openings to his right caught his eye. He did not remember noticing Finchley leave the helicopter to follow him, but he was glad of a guide.

'Don't you think so?' he added.

He turned his head, but Finchley was not there. In fact, now that Otis was aware of his surroundings, he could hear the voices of the other two mumbling distantly back by the aircraft.

'Seeing things!' he grumbled, and started through the ancient window.

Some instinct stopped him half a foot outside.

Come on, Jeff, he told himself, *don't be silly! What could be there? Ghosts?*

On the other hand, he realized, there were times when it was just as well to rely upon instinct – at least until you figured out the origin of the strange feeling. Any spaceman would agree to that. The man who developed an animal's sixth sense was the man who lived longest on alien planets.

He thought he must have paused a full minute or more, during which he had heard not the slightest sound except the mutter of voices to the rear. He peered into the chamber, which was about twenty feet square and well if not brightly lit by reflected light.

Nothing was to be seen, but when he found himself turning his head stealthily to peer over his shoulder, he decided that the queer sensation along the back of his neck meant something.

Wait now, he thought swiftly. *I didn't see quite the whole room.*

The flooring was heaped with wind-bared rubble that would not show footprints. He felt much more comfortable to notice himself thinking in that vein.

At least I'm not imagining ghosts, he thought.

Bending forward the necessary foot, he thrust his head through the opening and darted a quick look to the left, then to the right along the wall. As he turned right, his glance was met directly by a pair of very wide-set black eyes which shifted inward slightly as they got his range.

The Torang about matched his own six feet two, mainly because of elongated, gibbon-like limbs and a similarly crouching stance. Arms and legs, covered with short, curly, grey fur, had the same general proportions as human limbs, but looked half again too

long for a trunk that seemed to be ribbed all the way down. The shoulder and hip joints were compactly lean, rather as if the Torang had developed on a world of lesser gravity than that of the human.

It was the face that made Otis stare. The mouth was toothless and probably constructed more for sucking than for chewing. But the eyes! They projected like ends of a dumb-bell from each side of the narrow skull where the ears should have been, and focused with obvious mobility. Peering closer, Otis saw tiny ears below the eyes, almost hidden in the curling fur of the neck.

He realized abruptly that his own eyes felt as if they were bulging out, although he could not remember having changed his expression of casual curiosity. His back was getting stiff also. He straightened up carefully.

'Uh . . . hello,' he murmured, feeling unutterably silly but conscious of some impulse to compromise between a tone of greeting for another human being and one of pacification to an animal.

The Torang moved then, swiftly but unhurriedly. In fact, Otis later decided, deliberately. One of the long arms swept downwards to the rubble-strewn ground.

The next instant, Otis jerked his head back out of the opening as a stone whizzed past in front of his nose.

'Hey!' he protested involuntarily.

There was a scrabbling sound from within, as of animal claws churning to a fast start among the pebbles. Recovering his balance, Otis charged recklessly through the entrance.

'I don't know why,' he admitted to Finchley a few minutes later. 'If I stopped to think how I might have had my skull bashed in coming through, I guess I'd have just backed off and yelled for you.'

Finchley nodded, but his narrow gaze seemed faintly approving for the first time since they had met.

'He was gone, of course,' Otis continued. 'I barely caught a glimpse of his rump vanishing through another window.'

'Yeah, they're pretty fast,' put in Finchley's pilot. 'In the time we've been here, the boys haven't taken more than half a dozen. Got a stuffed one over at headquarters though.'

'Hm-m-m,' murmured Otis thoughtfully.

From their other remarks, he learned that he had not noticed everything, even though face to face with the creature. Finchley's mentioning the three digits of the hands or feet, for instance, came as a surprise.

Otis was silent most of the flight back to headquarters. Once there, he disappeared with a perfunctory excuse towards the rooms assigned him.

That evening, at a dinner which Finchley had made as attractive as was possible in a comparatively raw and new colony, Otis was noticeably sociable. The coordinator was gratified.

'Looks as if they finally sent us a regular guy,' he remarked behind his hand to one of his assistants. 'Round up a couple of the prettier secretaries to keep him happy.'

'I understand he nearly laid hands on a Torang up at the diggings,' said the other.

'Yep, ran right at it bare-handed. Came as close to bagging it as anybody could, I suppose.'

'Maybe it's just as well he didn't,' commented the assistant. 'They're big enough to mess up an unarmed man some.'

Otis, meanwhile and for the rest of the evening, was assiduously busy making acquaintances. So engrossed was he in turning every new conversation to the Torangs and asking seemingly casual questions about the little known of their habits and possible past, that he hardly noticed receiving any special attentions. As a visiting inspector, he was used to attempts to entertain and distract him.

The next morning, he caught Finchley at his office in the sprawling one-storey structure of concrete and glass that was colonial headquarters.

After accepting a chair across the desk from the coordinator, Otis told him his conclusions. Finchley's narrow eyes opened a trifle when he heard the details. His wide, hard-muscled face became slightly pink.

'Oh, for – ! I mean, Otis, why must you make something big out of it? The men very seldom bag one anyway!'

'Perhaps because they're so rare,' answered Otis calmly. 'How do we know they're not intelligent life? Maybe if you were hanging

on in the ruins of your ancestors' civilization, reduced to a primitive state, *you'd* be just as wary of a bunch of loud Terrans moving in!'

Finchley shrugged. He looked vaguely uncomfortable, as if debating whether Otis or some disgruntled sportsman from his husky construction crews would be easier to handle.

'Think of the over-all picture a minute,' Otis urged. 'We're pushing out into space at last, after centuries of dreams and struggles. With all the misery we've seen in various colonial systems at home, we've tried to plan these ventures so as to avoid old mistakes.'

Finchley nodded grudgingly. Otis could see that his mind was on the progress charts of his many projects.

'It stands to reason,' the inspector went on, 'that some day we'll find a planet with intelligent life. We're still new in space, but as we probe farther out it's bound to happen. That's why the Commission drew up rules about native life forms. Or have you read that part of the code lately?'

Finchley shifted from side to side in his chair.

'Now, look!' he protested. 'Don't go making *me* out a hard-boiled vandal with nothing in mind but exterminating everything that moves on all Torang. *I* don't go out hunting the apes!'

'I know, I know,' Otis soothed him. 'But before the Colonial Commission will sanction any destruction of indigenous life, we'll have to show – *besides* that it's not intelligent – that it exists in sufficient numbers to avoid extinction.'

'What do you expect me to do about it?'

Otis regarded him with some sympathy. Finchley was the hard-bitten type the Commission needed to oversee the first breaking-in of a colony on a strange planet, but he was not unreasonable. He merely wanted to be left alone to handle the tough job facing him.

'Announce a ban on hunting Torangs,' Otis said. 'There must be something else they can go after.'

'Oh, yes,' admitted Finchley. 'There are swarms of little rabbit-things and other vermin running through the brush. But, I don't know–'

'It's standard practice,' Otis reminded him. 'We have many a

protected species even back on Terra that would be extinct by now, but for the game laws.'

In the end they agreed that Finchley would do his honest best to enforce a ban, provided Otis obtained a formal order from the headquarters of the system. The inspector went from the office straight to the communications centre, where he filed a long report for the chief coordinator's office in the other part of the binary system.

It took some hours for the reply to reach Torang. When it came that afternoon, he went looking for Finchley.

He found the coordinator inspecting a newly finished canning factory on the coast, elated at the completion of one more link in making the colony self-sustaining.

'Here it is,' said Otis, waving the message copy. 'Signed by the chief himself. "As of this date, the ape-like beings known as Torangs, indigenous to planet number and so forth, are to be considered a rare and protected species under regulations and so forth et cetera."'

'Good enough,' answered Finchley with an amiable shrug. 'Give it here, and I'll have it put on the public address system and the bulletin boards.'

Otis returned satisfied to the helicopter that had brought him out from headquarters.

'Back, sir?' asked the pilot.

'Yes . . . *no*! Just for fun, take me out to the old city. I never did get a good look the other day, and I'd like to before I leave.'

They flew over the plains between the sea and the upjutting cliffs. In the distance Otis caught a glimpse of the rising dam he had been shown the day before. This colony would go well, he reflected, as long as he checked up on details like preserving native life forms.

Eventually the pilot landed at the same spot he had been taken to on his previous visit to the ancient ruins. Someone else was on the scene today. Otis saw a pair of men he took to be archaeologists.

'I'll just wander around a bit,' he told the pilot.

He noticed the two men looking at him from where they stood

by the shovels and other equipment, so he paused to say hello. As he thought, they had been digging in the ruins.

'Taking some measurements, in fact,' said the sunburned blond introduced as Hoffman. 'Trying to get a line on what sort of things built the place.'

'Oh?' said Otis, interested. 'What's the latest theory?'

'Not so much different from us,' Hoffman told the inspector while his partner left them to pick up another load of artifacts.

'Judging from the size of the rooms, height of doorways, and such stuff as stairways,' he went on, 'they were pretty much our size. So far, of course, it's only a rough estimate.'

'Could be ancestors of the Torangs, eh?' asked Otis.

'Very possible, sir,' answered Hoffman, with a promptness that suggested it was his own view. 'But we haven't dug up enough to guess at the type of culture they had, or draw any conclusions as to their psychology or social customs.'

Otis nodded, thinking that he ought to mention the young fellow's name to Finchley before he left Torang. He excused himself as the other man returned with a box of some sort of scraps the pair had unearthed, and strolled between the outlines of the untouched buildings.

In a few minutes he came to the section of higher structures where he had encountered the Torang the previous day.

'Wonder if I should look in the same spot?' he muttered aloud. 'No . . . that would be the *last* place the thing would return to . . . unless it had a lair thereabouts – '

He stopped to get his bearings, then shrugged and walked around a mound of rubble towards what he believed to be the proper building.

Pretty sure this was it, he mused. *Yes, shadows around that window arch look the same . . . same time of day –*

He halted, almost guiltily, and looked back to make sure no one was observing his return to the scene of his little adventure. After all, an inspector of colonial installations was not supposed to run around ghost-hunting like a small boy.

Finding himself alone, he stepped briskly through the crumbling arch – *and froze in his tracks.*

'I am honoured to know you,' said the Torang in a mild, rather buzzing voice. 'We thought you possibly would return here.'

Otis gaped. The black eyes projecting from the sides of the narrow head tracked him up and down, giving him the unpleasant sensation of being measured for an artillery salvo.

'I am known as Jal-Ganyr,' said the Torang. 'Unless I am given incorrect data, you are known as Jeff-Otis. That is so.'

The last statement was made with almost no inflection, but some still-functioning corner of Otis' mind interpreted it as a question. He sucked in a deep breath, suddenly conscious of having forgotten to breathe for a moment.

'I didn't know . . . yes, that is so . . . I didn't know you Torangs could speak Terran. Or anything else. How – ?'

He hesitated as a million questions boiled up in his mind to be asked. Jal-Ganyr absently stroked the grey fur of his chest with his three-fingered left hand, squatting patiently on a flat rock. Otis felt somehow that he had been allowed to waste time mumbling only by grace of disciplined politeness.

'I am not of the Torangs,' said Jal-Ganyr in his wheezing voice. 'I am of the Myrbs. You would possibly say Myrbii. I have not been informed.'

'You mean that is your name for yourselves?' asked Otis.

Jal-Ganyr seemed to consider, his mobile eyes swivelling inward to scan the Terran's face.

'More than that,' he said at last, when he had thought it over. 'I mean I am of the race originating at Myrb, not of this planet.'

'Before we go any further,' insisted Otis, 'tell me, at least, how you learned our language!'

Jal-Ganyr made a fleeting gesture. His 'face' was unreadable to the Terran, but Otis had the impression he had received the equivalent of a smile and a shrug.

'As to that,' said the Myrb, 'I possibly learned it before you did. We have observed you a very long time. You would unbelieve how long.'

'But then – ' Otis paused. That must mean before the colonists had landed on this planet. He was half afraid it might mean before

they had reached this sun system. He put aside the thought and asked, 'But then, why do you live like this among the ruins? Why wait till now? If you had communicated, you could have had our help rebuilding – '

He let his voice trail off, wondering what sounded wrong. Jal-Ganyr rolled his eyes about leisurely, as if disdaining the surrounding ruins. Again, he seemed to consider all the implications of Otis' questions.

'We picked up your message to your chief,' he answered at last. 'We decided time is to communicate with one of you.

'We have no interest in rebuilding,' he added. 'We have concealed quarters for ourselves.'

Otis found that his lips were dry from his unconsciously having let his mouth hang open. He moistened them with the tip of his tongue and relaxed enough to lean against the wall.

'You mean my getting the ruling to proclaim you a protected species?' he asked. 'You have instruments to intercept such signals?'

'I do. We have,' said Jal-Ganyr simply. 'It has been decided that you have expanded far enough into space to make necessary we contact a few of the thoughtful among you. It will possibly make easier in the future for our observers.'

Otis wondered how much of that was irony. He felt himself flushing at the memory of the 'stuffed specimen' at headquarters, and was peculiarly relieved that he had not gone to see it.

I've had the luck, he told himself. *I'm the one to discover the first known intelligent beings beyond Sol!*

Aloud, he said, 'We expected to meet someone like you eventually. But why have you chosen me?'

The question sounded vain, he realized, but it brought unexpected results.

'Your message. You made in a little way the same decision we made in a big way. We deduce that you are one to understand our regret and shame at what happened between our races . . . long ago.'

'Between – ?'

'Yes. For a long time, we thought you were all gone. We are pleased to see you returning to some of your old planets.'

Otis stared blankly. Some instinct must have enabled the Myrb to interpret his bewildered expression. He apologized briefly.

'I possibly forgot to explain the ruins.' Again, Jal-Ganyr's eyes swivelled slowly about.

'They are not ours,' he said mildly. 'They are yours.'

Before Eden

ARTHUR C. CLARKE

'I guess,' said Jerry Garfield, cutting the engines, 'that this is the end of the line.' With a gentle sigh, the underjets faded out; deprived of its air cushion, the scout ram *Rambling Wreck* settled down upon the twisted rocks of the Hesperian Plateau.

There was no way forward; neither on its jets nor its tractors could S_5 – to give the *Wreck* its official name – scale the escarpment that lay ahead. The South Pole of Venus was only thirty miles away, but it might have been on another planet. They would have to turn back, and retrace their four-hundred-mile journey through this nightmare landscape.

The weather was fantastically clear, with visibility of almost a thousand yards. There was no need of radar to show the cliffs ahead; for once, the naked eye was good enough. The green auroral light, filtering down through clouds that had rolled unbroken for a million years, gave the scene an under-water appearance, and the way in which all distant objects blurred into the haze added to the impression. Sometimes it was easy to believe that they were driving across a shallow sea bed, and more than once Jerry had imagined that he had seen fish floating overhead.

'Shall I call the ship, and say we're turning back?' he asked.

'Not yet,' said Dr Hutchins. 'I want to think.'

Jerry shot an appealing glance at the third member of the crew, but found no moral support there. Coleman was just as bad; although the two men argued furiously half the time, they were both scientists and therefore, in the opinion of a hardheaded engineer-navigator, not wholly responsible citizens. If Cole and

Hutch had bright ideas about going forward, there was nothing he could do except register a protest.

Hutchins was pacing back and forth in the tiny cabin, studying charts and instruments. Presently he swung the car's searchlight towards the cliffs, and began to examine them carefully with binoculars. Surely, thought Jerry, he doesn't expect me to drive up there! $S._5$ was a hover-track, not a mountain goat . . .

Abruptly, Hutchins found something. He released his breath in a sudden explosive gasp, then turned to Coleman.

'Look!' he said, his voice full of excitement. 'Just to the left of that black mark! Tell me what you see.'

He handed over the glasses, and it was Coleman's turn to stare.

'Well I'm damned,' he said at length. 'You were right. There *are* rivers on Venus. That's a dried-up waterfall.'

'So you owe me one dinner at the Bel Gourmet when we get back to Cambridge. With champagne.'

'No need to remind me. Anyway, it's cheap at the price. But this still leaves your other theories strictly on the crackpot level.'

'Just a minute,' interjected Jerry. 'What's all this about rivers and waterfalls? Everyone knows they can't exist on Venus. It never gets cold enough on this steam bath of a planet for the clouds to condense.'

'Have you looked at the thermometer lately?' asked Hutchins with deceptive mildness.

'I've been slightly too busy driving.'

'Then I've news for you. It's down to two hundred and thirty, and still falling. Don't forget – we're almost at the Pole, it's winter-time, and we're sixty thousand feet above the lowlands. All this adds up to a distinct nip in the air. If the temperature drops a few more degrees, we'll have rain. The water will be boiling, of course – but it will be water. And though George won't admit it, this puts Venus in a completely different light.'

'Why?' asked Jerry, though he had already guessed.

'Where there's water, there may be life. We've been in too much of a hurry to assume that Venus is sterile, merely because the average temperature's over five hundred degrees. It's a lot colder here, and that's why I've been so anxious to get to the Pole. There

are lakes up here in the highlands, and I want to look at them.'

'But *boiling* water!' protested Coleman. 'Nothing could live in that!'

'There are algae that manage it on Earth. And if we've learned one thing since we started exploring the planets, it's this: wherever life has the slightest chance of surviving, you'll find it. This is the only chance it's ever had on Venus.'

'I wish we could test your theory. But you can see for yourself – we can't go up that cliff.'

'Perhaps not in the car. But it won't be too difficult to climb those rocks, even wearing thermosuits. All we need do is walk a few miles towards the Pole; according to the radar maps, it's fairly level once you're over the rim. We could manage in – oh, twelve hours at the most. Each of us has been out for longer than that, in much worse conditions.'

That was perfectly true. Protective clothing that had been designed to keep men alive in the Venusian lowlands would have an easy job here, where it was only a hundred degrees hotter than Death Valley in midsummer.

'Well,' said Coleman, 'you know the regulations. You can't go by yourself, and someone has to stay here to keep contact with the ship. How do we settle it this time – chess or cards?'

'Chess takes too long,' said Hutchins, 'especially when you two play it.' He reached into the chart table and produced a well-worn pack. 'Cut them, Jerry.'

'Ten of spades. Hope you can beat it, George.'

'So do I. Damn – only five of clubs. Well, give my regards to the Venusians.'

Despite Hutchins' assurance, it was hard work climbing the escarpment. The slope was not too steep, but the weight of oxygen gear, refrigerated thermosuit, and scientific equipment came to more than a hundred pounds per man. The lower gravity – thirteen per cent weaker than Earth's – gave a little help, but not much, as they toiled up screes, rested on ledges to regain breath, and then clambered on again through the submarine twilight. The emerald glow that washed around them was brighter than that of the full moon on Earth. A moon would have been wasted on Venus, Jerry told himself; it could never have been seen from the surface, there

were no oceans for it to rule – and the incessant aurora was a far more constant source of light.

They had climbed more than two thousand feet before the ground levelled out into a gentle slope, scarred here and there by channels that had clearly been cut by running water. After a little searching, they came across a gulley wide and deep enough to merit the name of river bed, and started to walk along it.

'I've just thought of something,' said Jerry after they had travelled a few hundred yards. 'Suppose there's a storm up ahead of us? I don't feel like facing a tidal wave of boiling water.'

'If there's a storm,' replied Hutchins a little impatiently, 'we'll hear it. There'll be plenty of time to reach high ground.'

He was undoubtedly right, but Jerry felt no happier as they continued to climb the gently shelving watercourse. His uneasiness had been growing ever since they had passed over the brow of the cliff and had lost radio contact with the scout car. In this day and age to be out of touch with one's fellow-men was a unique and unsettling experience. It had never happened to Jerry before in all his life; even aboard the *Morning Star*, when they were a hundred million miles from Earth, he could always send a message to his family and get a reply back within minutes. But now a few yards of rock had cut him off from the rest of mankind; if anything happened to them here, no one would ever know, unless some later expedition found their bodies. George would wait for the agreed number of hours; then he would head back to the ship – alone. I guess I'm not really the pioneering type, Jerry told himself. I like running complicated machines, and that's how I got involved in space flight. But I never stopped to think where it would lead, and now it's too late to change my mind . . .

They had travelled perhaps three miles towards the Pole, following the meanders of the river bed, when Hutchins stopped to make observations and collect specimens. 'Still getting colder!' he said. 'The temperature's down to one hundred and ninety-nine. That's far and away the lowest ever recorded on Venus. I wish we could call George and let him know.'

Jerry tried all the wave bands; he even attempted to raise the ship – the unpredictable ups and downs of the planet's ionosphere sometimes made such long-distance reception possible – but there

was not a whisper of a carrier wave above the roar and crackle of the Venusian thunderstorms.

'This is even better,' said Hutchins, and now there was real excitement in his voice. 'The oxygen concentration's way up – fifteen parts in a million. It was only five back at the car, and down in the lowlands you can scarcely detect it.'

'But fifteen in a *million*!' protested Jerry. 'Nothing could breathe that!'

'You've got hold of the wrong end of the stick,' Hutchins explained. 'Nothing does breathe it. Something *makes* it. Where do you think Earth's oxygen comes from? It's all produced by life – by growing plants. Before there were plants on Earth, our atmosphere was just like this one – a mess of carbon dioxide and ammonia and methane. Then vegetation evolved and slowly converted the atmosphere into something that animals could breathe.'

'I see,' said Jerry, 'and you think that the same process has just started here?'

'It looks like it. *Something* not far from here is producing oxygen – and plant life is the simplest explanation.'

'And where there are plants,' mused Jerry, 'I suppose you'll have animals, sooner or later.'

'Yes,' said Hutchins, packing his gear and starting up the gulley, 'though it takes a few hundred million years. We may be too soon – but I hope not.'

'That's all very well,' Jerry answered. 'But suppose we meet something that doesn't like us? We've no weapons.'

Hutchins gave a snort of disgust.

'And we don't need them. Have you stopped to think what we look like? Any animal would run a mile at the sight of us.'

There was some truth in that. The reflecting metal foil of their thermosuits covered them from head to foot like flexible, glittering armour. No insects had more elaborate antennae than those mounted on their helmets and back packs, and the wide lenses through which they stared out at the world looked like blank yet monstrous eyes. Yes, there were few animals on Earth that would stop to argue with such apparitions; but any Venusians might have different ideas.

Jerry was still mulling this over when they came upon the lake.

Even at that first glimpse, it made him think not of the life they were seeking, but of death. Like a black mirror, it lay amid a fold of the hills; its far edge was hidden in the eternal mist, and ghostly columns of vapour swirled and danced upon its surface. All it needed, Jerry told himself, was Charon's ferry waiting to take them to the other side – or the Swan of Tuonela swimming majestically back and forth as it guarded the entrance to the Underworld . . .

Yet for all this, it was a miracle – the first free water that men had ever found on Venus. Hutchins was already on his knees, almost in an attitude of prayer. But he was only collecting drops of the precious liquid to examine through his pocket microscope.

'Anything there?' asked Jerry anxiously.

Hutchins shook his head.

'If there is, it's too small to see with this instrument. I'll tell you more when we're back at the ship.' He sealed a test tube and placed it in his collecting bag, as tenderly as any prospector who had just found a nugget laced with gold. It might be – it probably was – nothing more than plain water. But it might also be a universe of unknown, living creatures on the first stage of their billion-year journey to intelligence.

Hutchins had walked no more than a dozen yards along the edge of the lake when he stopped again, so suddenly that Garfield nearly collided with him.

'What's the matter?' Jerry asked. 'See something?'

'That dark patch of rock over there. I noticed it before we stopped at the lake.'

'What about it? It looks ordinary enough to me.'

'*I think it's grown bigger.*'

All his life Jerry was to remember this moment. Somehow he never doubted Hutchins' statement; by this time he could believe anything, even that rocks could grow. The sense of isolation and mystery, the presence of that dark and brooding lake, the never-ceasing rumble of distant storms and the green flickering of the aurora – all these had done something to his mind, had prepared it to face the incredible. Yet he felt no fear; that would come later.

He looked at the rock. It was about five hundred feet away, as far as he could estimate. In this dim, emerald light it was hard to

judge distances or dimensions. The rock – or whatever it was – seemed to be a horizontal slab of almost black material, lying near the crest of a low ridge. There was a second, much smaller, patch of similar material near it; Jerry tried to measure and memorize the gap between them, so that he would have some yardstick to detect any change.

Even when he saw that the gap was slowly shrinking, he still felt no alarm – only a puzzled excitement. Not until it had vanished completely, and he realized how his eyes had tricked him, did that awful feeling of helpless terror strike into his heart.

Here were no growing or moving rocks. What they were watching was a dark tide, a crawling carpet, sweeping slowly but inexorably towards them over the top of the ridge.

The moment of sheer, unreasoning panic lasted, mercifully, no more than a few seconds. Garfield's first terror began to fade as soon as he recognized its cause. For that advancing tide had reminded him, all too vividly, of a story he had read many years ago about the army ants of the Amazon, and the way in which they destroyed everything in their path . . .

But whatever this tide might be, it was moving too slowly to be a real danger, unless it cut off their line of retreat. Hutchins was staring at it intently through their only pair of binoculars; he was the biologist, and he was holding his ground. No point in making a fool of myself, thought Jerry, by running like a scalded cat, if it isn't necessary.

'For heaven's sake,' he said at last, when the moving carpet was only a hundred yards away and Hutchins had not uttered a word or stirred a muscle. 'What *is* it?'

Hutchins slowly unfroze, like a statue coming to life.

'Sorry,' he said. 'I'd forgotten all about you. It's a plant, of course. At least, I suppose we'd better call it that.'

'But it's *moving*!'

'Why should that surprise you? So do terrestrial plants. Ever seen speeded-up movies of ivy in action?'

'That still stays in one place – it doesn't crawl all over the landscape.'

'Then what about the plankton plants of the sea? *They* can swim when they have to.'

Jerry gave up; in any case, the approaching wonder had robbed him of words.

He still thought of the thing as a carpet – a deep-pile one, ravelled into tassels at the edges. It varied in thickness as it moved; in some parts it was a mere film; in others, it heaped up to a depth of a foot or more. As it came closer and he could see its texture, Jerry was reminded of black velvet. He wondered what it felt like to the touch, then remembered that it would burn his fingers even if it did nothing else to them. He found himself thinking, in the light-headed nervous reaction that often follows a sudden shock: 'If there *are* any Venusians, we'll never be able to shake hands with them. They'd burn us, and we'd give them frostbite.'

So far the thing had shown no signs that it was aware of their presence. It had merely flowed forward like the mindless tide that it almost certainly was. Apart from the fact that it climbed over small obstacles, it might have been an advancing flood of water.

And then, when it was only ten feet away, the velvet tide checked itself. On the right and the left, it still flowed forward; but dead ahead it slowed to a halt.

'We're being encircled,' said Jerry anxiously. 'Better fall back, until we're sure it's harmless.'

To his relief, Hutchins stepped back at once. After a brief hesitation, the creature resumed its slow advance and the dent in its front line straightened out.

Then Hutchins stepped forward again – and the thing slowly withdrew. Half a dozen times the biologist advanced, only to retreat again, and each time the living tide ebbed and flowed in synchronism with his movements. I never imagined, Jerry told himself, that I'd live to see a man waltzing with a plant . . .

'Thermophobia,' said Hutchins. 'Purely automatic reaction. It doesn't like our heat.'

'*Our* heat!' protested Jerry. 'Why, we're living icicles by comparison.'

'Of course – but our suits aren't, and that's all it knows about.'

Stupid of me, thought Jerry. When you were snug and cool inside your thermosuit, it was easy to forget that the refrigeration unit on your back was pumping a blast of heat out into the sur-

rounding air. No wonder the Venusian plant had shied away. . .

'Let's see how it reacts to light,' said Hutchins. He switched on his chest lamp, and the green auroral glow was instantly banished by the flood of pure white radiance. Until Man had come to this planet, no white light had ever shone upon the surface of Venus, even by day. As in the seas of Earth, there was only a green twilight, deepening slowly to utter darkness.

The transformation was so stunning that neither man could check a cry of astonishment. Gone in a flash was the deep, sombre black of the thick-piled velvet carpet at their feet. Instead, as far as their lights carried lay a blazing pattern of glorious, vivid reds, laced with streaks of gold. No Persian prince could ever have commanded so opulent a tapestry from his weavers, yet this was the accidental product of biological forces. Indeed, until they had switched on their floods, these superb colours had not even existed, and they would vanish once more when the alien light of Earth ceased to conjure them into being.

'Tikov was right,' murmured Hutchins. 'I wish he could have known.'

'Right about what?' asked Jerry, though it seemed almost a sacrilege to speak in the presence of such loveliness.

'Back in Russia, fifty years ago, he found that plants living in very cold climates tended to be blue and violet, while those from hot ones were red or orange. He predicted that the Martian vegetation would be violet, and said that if there were plants on Venus they'd be red. Well, he was right on both counts. But we can't stand here all day – we've work to do.'

'You're sure it's quite safe?' asked Jerry, some of his caution reasserting itself.

'Absolutely – it can't touch our suits even if it wants to. Anyway, it's moving past us.'

That was true. They could see now that the entire creature – if it was a single plant, and not a colony – covered a roughly circular area about a hundred yards across. It was sweeping over the ground, as the shadow of a cloud moves before the wind – and where it had rested, the rocks were pitted with innumerable tiny holes that might have been etched by acid.

'Yes,' said Hutchins, when Jerry remarked about this. 'That's

how some lichens feed; they secrete acids that dissolve rock. But no questions, please – not till we get back to the ship. I've several lifetimes' work here, and a couple of hours to do it in.'

This was botany on the run . . . The sensitive edge of the huge plant-thing could move with surprising speed when it tried to evade them. It was as if they were dealing with an animated flapjack, an acre in extent. There was no reaction – apart from the automatic avoidance of their exhaust heat – when Hutchins snipped samples or took probes. The creature flowed steadily onward over hills and valleys, guided by some strange vegetable instinct. Perhaps it was following some vein of mineral; the geologists could decide that, when they analysed the rock samples that Hutchins had collected both before and after the passage of the living tapestry.

There was scarcely time to think or even to frame the countless questions that their discovery had raised. Presumably these creatures must be fairly common, for them to have found one so quickly. How did they reproduce? By shoots, spores, fission, or some other means? Where did they get their energy? What relatives, rivals, or parasites did they have? This could not be the only form of life on Venus – the very idea was absurd, for if you had one species, you must have thousands . . .

Sheer hunger and fatigue forced them to a halt at last. The creature they were studying could eat its way around Venus – though Hutchins believed that it never went very far from the lake, as from time to time it approached the water and inserted a long, tube-like tendril into it – but the animals from Earth had to rest.

It was a great relief to inflate the pressurized tent, climb in through the airlock, and strip off their thermosuits. For the first time, as they relaxed inside their tiny plastic hemisphere, the true wonder and importance of the discovery forced itself upon their minds. This world around them was no longer the same; Venus was no longer dead – it had joined Earth and Mars.

For life called to life, across the gulfs of space. Everything that grew or moved upon the face of any planet was a portent, a promise that Man was not alone in this universe of blazing suns and swirling nebulae. If as yet he had found no companions with whom he could speak, that was only to be expected, for the light-years and the ages still stretched before him, waiting to be ex-

plored. Meanwhile, he must guard and cherish the life he found, whether it be upon Earth or Mars or Venus.

So Graham Hutchins, the happiest biologist in the solar system, told himself as he helped Garfield collect their refuse and seal it into a plastic disposal bag. When they deflated the tent and started on the homeward journey, there was no sign of the creature they had been examining. That was just as well; they might have been tempted to linger for more experiments, and already it was getting uncomfortably close to their deadline.

No matter; in a few months they would be back with a team of assistants, far more adequately equipped, and with the eyes of the world upon them. Evolution had laboured for a billion years to make this meeting possible; it could wait a little longer.

For a while nothing moved in the greenly glimmering, fog-bound landscape; it was deserted by man and crimson carpet alike. Then, flowing over the wind-carved hills, the creature reappeared. Or perhaps it was another of the same strange species; no one would ever know.

It flowed past the little cairn of stones where Hutchins and Garfield had buried their wastes. And then it stopped.

It was not puzzled, for it had no mind. But the chemical urges that drove it relentlessly over the polar plateau were crying: Here, here! Somewhere close at hand was the most precious of all the foods it needed – phosphorus, the element without which the spark of life could never ignite. It began to nuzzle the rocks, to ooze into the cracks and crannies, to scratch and scrabble with probing tendrils. Nothing that it did was beyond the capacity of any plant or tree on Earth – but it moved a thousand times more quickly, requiring only minutes to reach its goal and pierce through the plastic film.

And then it feasted, on food more concentrated than any it had ever known. It absorbed the carbohydrates and the proteins and the phosphates, the nicotine from the cigarette ends, the cellulose from the paper cups and spoons. All these it broke down and assimilated into its strange body, without difficulty and without harm.

Likewise it absorbed a whole microcosmos of living creatures – the bacteria and viruses which, upon an older planet, had evolved into a thousand deadly strains. Though only a very few could survive in

this heat and this atmosphere, they were sufficient. As the carpet crawled back to the lake, it carried contagion to all its world.

Even as the Morning Star *set course for her distant home, Venus was dying. The films and photographs and specimens that Hutchins was carrying in triumph were more precious even than he knew. They were the only record that would ever exist of life's third attempt to gain a foothold in the solar system.*

Beneath the clouds of Venus, the story of Creation was ended.

The Rescuer

ARTHUR PORGES

It was by far the largest, most intricate machine ever built.

Its great complex of auxiliary components covered two square blocks, and extended hundreds of feet beneath the earth. There were fifty huge electronic computers at the heart of it. They had to be capable of solving up to thirty thousand simultaneous partial differential equations in as many variables in any particular millisecond. The energy which the machine required to operate successfully on a mass of M pounds was given by a familiar formula: $E=MK^2$. The K was not, as in Einstein's equation, the velocity of light; but it was large enough so that only one type of power could be used: the thermonuclear reaction called hydrogen fusion.

Designing the machine and developing the theory of its operation had taken thirty years; building it, another ten. It had cost three billion dollars, an amount to be amortized over roughly one hundred years, and supplied by fifteen countries.

Like the atomic bomb, the machine could not be tested piecemeal; only the final, complete assembly would be able to settle the question of success or failure. So far, no such trial of its capabilities had been made. When the time came, a one milligram sample of pure platinum would be used.

It was the largest, most intricate, expensive, fascinating, and dangerous machine ever built. And two men were about to destroy it. They would have to release a large amount of thermonuclear energy in order to wreck the machine. It was the only way in the circumstances. It was a heartbreaking decision to have to make.

Perhaps they should have contacted higher authorities in Washington, since the machine, although quite international in scope, was located in California; but that was too dangerous with time so short. Bureaucratic timidity might very well cause a fatal delay. So, knowing the consequences to them, the two scientists did what they believed had to be done. The machine, together with several blocks of supporting equipment, including the irreplaceable computers, was vaporized. They escaped in a fast air car.

PRELIMINARY HEARING – A TRANSCRIPT
THE UNITED STATES versus DR CARNOT
THE UNITED STATES versus DR KENT

14 April, 2015

(Extract)

JUDGE CLARK: How did the man know the operation, when the machine had never even been tested?

DR CARNOT: The theory had been widely discussed in many scientific papers – even popular magazines. And the man was a technician of sorts. Besides, it wasn't necessary to understand the theory; not more than forty or fifty men in this country could. He must have seen numerous pictures of the controls. The settings are simple; any engineer can use a vernier.

JUDGE CLARK: I think you'd better tell this court just what happened from the beginning. Your strange reticence has caused a great deal of speculation. You understand that if found guilty you must be turned over to the U.N. Criminal Court for prosecution.

DR CARNOT: Yes, Your Honour; I know that.

JUDGE CLARK: Very well. Go ahead.

DR CARNOT: Dr Kent and myself were the only ones in the area that night. It was a matter of chance that we decided to check some minor point about the bus bars. To our astonishment, when we arrived at the control room, the machine was in operation.

JUDGE CLARK: How did you know the machine was being used?

DR CARNOT: In many ways; all the indicators were reacting; but primarily the mass-chamber itself, which had dislimned and assumed the appearance of a misty, rainbow-coloured sphere.

JUDGE CLARK: I see. Go on.

DR CARNOT: Dr Kent and I were shocked beyond expression. We saw from the readings that the person, whoever he was, had entered for a really fantastic number of ergs – that is, energy. Far more than any of us would have dared to use for many months, if at all. (At this point Senator King interposed a question.)

SENATOR KING: How did the fellow get into the area? What about the Security?

DR CARNOT: As you know, the machine is international, and sponsored by the U.N. Since there is no longer any military rivalry among the members, the work is purely scientific, and no country can be excluded. Naturally, the complex is protected against crackpots; but this man worked on the project as a Class 5 technician, and must have known how to avoid the infra-red and other warning systems.

JUDGE CLARK: We had better not confuse the issue with such digressions. How the man got in is no longer important. But your sudden knowledge of his background is, Dr Carnot. In an earlier statement you claimed to have no information about his identity. How do you explain that?

DR CARNOT: I had to lie.

JUDGE CLARK: Had to?

DR CARNOT: Yes, Your Honour. All of that will become clear, I hope, later in my testimony. Right now, let me clarify our dilemma. The machine was definitely in operation, and had been for about eight minutes. We couldn't be certain that it would work – I mean to the extent of completing the job as programmed by the intruder; but the theory had been carefully investigated, and all the computations, which, as you know, took many years, checked out. It is a peculiarity of the machine, related to the solution of thousands of the most complicated differential equations, that there can be neither a cessation nor a reversal of its operation without grave danger to the entire state – perhaps even a larger area. The combination of vast energies and the warping of space-time that would result, according to theory, might vapourize hundreds of square miles. For this reason, and others, our plans had not gone beyond trying masses less than one gram.

JUDGE CLARK: Let me understand your point. It was impossible merely to shut off the machine? Stop the power?

DR CARNOT: If the theory is sound, yes. I can only suggest the analogy of breaking an electrical circuit involving millions of amperes – the current jumps the gap, forming an arc which is very difficult to stop. Well, in this case, it was not merely millions of amps, but energies comparable only to those emitted by a large mass of the sun itself. In short, the only way to prevent completion of this particular operation was to bleed off enough of that energy to destroy most of the complex. That, at least, would save the populated areas. Remember, we had only about twelve minutes in which to choose a course of action.

JUDGE CLARK: But you weren't even sure the machine would work; that is, that the man would really survive. Yet you deliberately wiped out a three billion dollar project.

DR CARNOT: We simply couldn't risk it, Your Honour. If the man did survive, and succeeded in his mission, the dangers were almost inconceivable. Even philosophically they are more than the human mind can grasp.

JUDGE CLARK: But neither of you has been willing so far to explain that point. This court is still completely in the dark. Who was the man, and what did he attempt to do?

DR CARNOT: Up to now, we weren't ready to speak. But if you will clear the court except for yourself, the President, and a few high, responsible officials, I'll try to satisfy this tribunal. The fact is, as you will see, that a large part of the public, in this country, at least, might approve of what that man tried to do. It may not be possible to convince laymen – people not used to the abstractions of philosophy or science – of the great risk involved. I can only hope that this court will appreciate the implications. I should add that Dr Kent and myself have seriously considered refusing any further information, but merely pleading guilty to wilful destruction of the machine. As it is, if you decide to release us to the U.N. for criminal proceedings, we still might have to do just that – which means your records would have to be suppressed. Our only reason for testifying is not to save our own lives, but the hope that we can contribute to the design of a new machine. And to better understanding of the problems involved in the operation. Among the public, that is.

JUDGE CLARK: I must take your attitude seriously; that is very

plain. Do you persist in maintaining that this room should be cleared, and all broadcasting suspended? Press, distinguished scientists, senators – all these are not qualified to hear the testimony?

DR CARNOT: I only mean that the fewer who hear me, the fewer mouths to be guarded. And I'm sure this court will feel the same way when all my evidence is in.

JUDGE CLARK: Very well, then. The bailiffs will clear the room, except for the President, the National Security Council, and the Chairman of the Research Committee of the Congress. All electronic equipment will be disconnected; a complete spy curtain will be put on this room. Court will adjourn for two hours, reconvening at 1500.

PRELIMINARY HEARING (*continued*)

JUDGE CLARK: We are ready to hear your testimony now, Dr Carnot.

DR CARNOT: Do I have Your Honour's absolute assurance that nobody outside this room can hear us?

JUDGE CLARK: You do. The spy curtain, which your own colleagues in science claim bars all wave lengths, is on at full strength.

DR CARNOT: If I seem too cautious, there is a reason, as you will see.

JUDGE CLARK: I certainly hope so. Now, will you please give the real point of this testimony? What was the man – and incidentally, has any identification come in on him yet? No? Well, what was he doing that seems to have scared you so?

DR CARNOT: His name doesn't matter; it was on the note he left.

JUDGE CLARK: What note? Nothing was said about a note. Here this court has been trying to identify the man, and all the time –

DR CARNOT: I'm sorry, Your Honour; that is part of the testimony we thought had better be withheld until now. The man did leave a note, explaining just what he meant to do with the time machine.

JUDGE CLARK: And what was that?

DR CARNOT: He had set the dial for a two thousand year trip

into the past. That accounted for the vast amount of energy required. You see, it varies not only with the mass transported, but the time as well.

JUDGE CLARK: Two thousand years!

DR CARNOT: That's right, Your Honour. In itself, that's bad enough. It is one thing to send a small mass or a sterile insect back in time; even then, there are dangers we can hardly predict. The present is intricately involved with the past – stems from it, in fact. It's like altering the origin of a river; a little change at the source can make a tremendous difference at the mouth. Even move it fifty miles away. Now a modern man in the world of two thousand years ago – frankly, Your Honour, we just don't know what that might do. It seems fantastic to believe that he could change the here-and-now, and yet the theory implies that this whole universe might change completely, or even vanish. Don't ask me where or how.

(At this point, Professor Pirenian, of the National Security Council, broke in with a question.)

PIRENIAN: Why didn't you and Dr Kent merely send another man to intercept this one? Yours, by the machine, could obviously set the dials to get there first, thus snatching the first one back before he could do any harm.

DR CARNOT: We thought of that, even in the few minutes we had. But suppose that this world vanished before we could cut in ahead of him? Believe me, the paradoxes are maddening; no amount of mathematical wrangling can settle them; only experiment. We couldn't chance it; that's all.

PIRENIAN: You're right, of course. Maybe we should be glad, gentlemen, that Dr Carnot – and Dr Kent – were there instead of the rest of us!

DR CARNOT: You still don't know the real danger. What I've said so far applies to an impulsive, random trip to the distant past, where the man had no specific intentions. But Michael Nauss did have a particular plan – a wild, crazy, and yet, in a way, magnificent conception. One that the public, or much of it, might foolishly support without realizing the consequences. I speak of this country, and people in Europe; not in Asia, for the most part. And he had

set the vernier with perfect precision, which made his plan even more feasible.

JUDGE CLARK: What was he going to do?

DR CARNOT: According to his note, this man had taken with him a repeating rifle and five thousand rounds of exploding ammunition. His intention was nothing less than to arrive at Golgotha in time to rescue Jesus Christ from the Roman soldiers. In short, to prevent the crucifixion. And with a modern rifle, who can say he wouldn't succeed? And then what? Then what? The implications are staggering. Disregarding the Christian dogma, which asserts Jesus *had* to die for our sins, what of the effect on the future, the entire stream of history, secular as well as religious? Maybe Jesus himself would have prevented this madman from saving him – but who can be sure? Yet, if you ask the man in the street, now, in this year 2015: Shall we save Jesus Christ from the cross? – what would he answer? Whose side would he take? Ours, or Michael Nauss'? That is why Dr Kent and I destroyed the machine; and why we face this court now. We believe the proceedings should not be released. The decision is yours. We made ours that night.

I Made You

WALTER M. MILLER, JR

It had disposed of the enemy, and it was weary. It sat on the crag by night. Gaunt, frigid, wounded, it sat under the black sky and listened to the land with its feet, while only its dishlike ear moved in slow patterns that searched the surface of the land and the sky. The land was silent, airless. Nothing moved, except the feeble thing that scratched in the cave. It was good that nothing moved. It hated sound and motion. It was in its nature to hate them. About the thing in the cave it could do nothing until dawn. The thing muttered in the rocks –

'*Help me! Are you all dead? Can't you hear me? This is Sawyer. Sawyer calling anybody, Sawyer calling anybody* – '

The mutterings were irregular, without pattern. It filtered them out, refusing to listen. All was seeping cold. The sun was gone, and there had been near-blackness for two hundred and fifty hours, except for the dim light of the sky-orb which gave no food, and the stars by which it told the time.

It sat wounded on the crag and expected the enemy. The enemy had come charging into the world out of the unworld during the late afternoon. The enemy had come brazenly, with neither defensive manoeuvring nor offensive fire. It had destroyed them easily – first the big lumbering enemy that rumbled along on wheels, and then the small enemies that scurried away from the gutted hulk. It had picked them off one at a time, except for the one that crept into the cave and hid itself beyond a break in the tunnel.

It waited for the thing to emerge. From its vantage point atop the crag it could scan broken terrain for miles around, the craters

and crags and fissures, the barren expanse of dust-flat that stretched to the west, and the squarish outlines of the holy place near the tower that was the centre of the world. The cave lay at the foot of a cliff to the south-east, only a thousand yards from the crag. It could guard the entrance to the cave with its small spitters, and there was no escape for the lingering trace of enemy.

It bore the mutterings of the hated thing even as it bore the pain of its wounds, patiently, waiting for a time of respite. For many sunrises there had been pain, and still the wounds were unrepaired. The wounds dulled some of its senses and crippled some of its activators. It could no longer follow the flickering beam of energy that would lead it safely into the unworld and across it to the place of creation. It could no longer blink out the pulses that reflected the difference between healer and foe. Now there was only foe.

'*Colonel Aubrey, this is Sawyer. Answer me! I'm trapped in a supply cache! I think the others are dead. It blasted us as soon as we came near. Aubrey from Sawyer, Aubrey from Sawyer. Listen! I've got only one cylinder of oxygen left, you hear? Colonel, answer me!*'

Vibrations in the rock – nothing more – only a minor irritant to disturb the blessed stasis of the world it guarded. The enemy was destroyed, except for the lingering trace in the cave. The lingering trace was neutralized, however, and did not move.

Because of its wounds, it nursed a brooding anger. It could not stop the damage signals that kept firing from its wounded members, but neither could it accomplish the actions that the agonizing signals urged it to accomplish. It sat and suffered and hated the crag.

It hated the night, for by night there was no food. Each day it devoured sun, strengthened itself for the long, long watch of darkness; but when dawn came, it was feeble again, and hunger was a fierce passion within. It was well, therefore, that there was peace in the night, that it might conserve itself and shield its bowels from the cold. If the cold penetrated the insulating layers, thermal receptors would begin firing warning signals, and agony would increase. There was much agony. And, except in time of battle, there was no pleasure, except in devouring sun.

To protect the holy place, to restore stasis to the world, to kill enemy – these were the pleasures of battle. It knew them.

And it knew the nature of the world. It had learned every inch of land out to the pain perimeter, beyond which it could not move. And it had learned the surface features of the demiworld beyond, learned them by scanning with its long-range senses. The world, the demiworld, the unworld – these were Outside, constituting the Universe.

'*Help me, help me, help me! This is Captain John Harbin Sawyer, Autocyber Corps, Instruction and Programming Section, currently of Salvage Expedition Lunar Sixteen. Isn't anybody alive on the Moon? Listen! Listen to me! I'm sick. I've been here God knows how many days . . . in a suit. It stinks. Did you ever live in a suit for days? I'm sick. Get me out of here!*'

The enemy's place was unworld. If the enemy approached closer than the outer range, it must kill; this was a basic truth that it had known since the day of creation. Only the healers might move with impunity over all the land, but now the healers never came. It could no longer call them nor recognize them – because of the wound.

It knew the nature of itself. It learned of itself by introspecting damage, and by internal scanning. It alone was 'being'. All else was of the outside. It knew its functions, its skills, its limitations. It listened to the land with its feet. It scanned the surface with many eyes. It tested the skies with a flickering probe. In the ground, it felt the faint seisms and random noise. On the surface, it saw the faint glint of starlight, the heat-loss from the cold terrain, and the reflected pulses from the tower. In the sky, it saw only stars, and heard only the pulse-echo from the faint orb of Earth overhead. It suffered the gnawings of ancient pain, and waited for the dawn.

After an hour, the thing began crawling in the cave. It listened to the faint scraping sounds that came through the rocks. It lowered a more sensitive pickup and tracked the sounds. The remnant of enemy was crawling softly towards the mouth of the cave. It turned a small spitter towards the black scar at the foot of the Earthlit cliff. It fired a bright burst of tracers towards the cave, and saw them ricochet about the entrance in bright but noiseless streaks over the airless land.

'*You dirty greasy deadly monstrosity, let me alone! You ugly*

juggernaut, I'm Sawyer. Don't you remember? I helped to train you ten years ago. You were a rookie under me . . . heh heh! Just a dumb autocyber rookie . . . with the firepower of a regiment. Let me go. Let me go!'

The enemy-trace crawled towards the entrance again. And again a noiseless burst of machine-gun fire spewed about the cave, driving the enemy fragment back. More vibrations in the rock –

'I'm your friend. The war's over. It's been over for months . . . Earthmonths. Don't you get it. Grumbler? "Grumbler" – we used to call you that back in your rookie days – before we taught you how to kill. Grumbler. Mobile autocyber fire control. Don't you know your pappy, son?'

The vibrations were an irritant. Suddenly angry, it wheeled around on the crag, gracefully manoeuvring its massive bulk. Motors growling, it moved from the crag on to the hillside, turned again, and lumbered down the slope. It charged across the flatlands and braked to a halt fifty yards from the entrance to the cave. Dust geysers sprayed up about its caterpillars and fell like jets of water in the airless night. It listened again. All was silent in the cave.

'Go 'way, sonny,' quavered the vibrations after a time. *'Let pappy starve in peace.'*

It aimed the small spitter at the centre of the black opening and hosed two hundred rounds of tracers into the cave. It waited. Nothing moved inside. It debated the use of a radiation grenade, but its arsenal was fast depleting. It listened for a time, watching the cave, looming five times taller than the tiny flesh-thing that cowered inside. Then it turned and lumbered back across the flat to resume its watch from the crag. Distant motion, out beyond the limits of the demiworld, scratched feebly at the threshold of its awareness – but the motion was too remote to disturb.

The thing was scratching in the cave again.

'I'm punctured, do you hear? I'm punctured. A shard of broken rock. Just a small leak, but a slap-patch won't hold. My suit! Aubrey from Sawyer, Aubrey from Sawyer. Base control from Moonwagon Sixteen. Message for you, over. He he. Gotta observe procedure. I got shot! I'm punctured. Help!'

The thing made whining sounds for a time, then: *'All right, it's only my leg. I'll pump the boot full of water and freeze it. So I lose*

a leg. Whatthehell, take your time.' The vibrations subsided into whining sounds again.

It settled again on the crag, its activators relaxing into a lethargy that was full of gnawing pain. Patiently it awaited the dawn.

The movement towards the south was increasing. The movement nagged at the outer fringes of the demiworld, until at last the movement became an irritant. Silently, a drill slipped down from its belly. The drill gnawed deep into the rock, then retracted. It slipped a sensitive pickup into the drill hole and listened carefully to the ground.

A faint purring in the rocks – mingled with the whining from the cave.

It compared the purring with recorded memories. It remembered similar purrings. The sound came from a rolling object far to the south. It tried to send the pulses that asked 'Are you friend or foe?' but the sending organ was inoperative. The movement, therefore, was enemy – but still beyond range of its present weapons.

Lurking anger, and expectation of battle. It stirred restlessly on the crag, but kept its surveillance of the cave. Suddenly there was disturbance on a new sensory channel, vibrations similar to those that came from the cave; but this time the vibrations came across the surface, through the emptiness, transmitted in the long-wave spectra.

'*Moonwagon Sixteen from Command Runabout, give us a call. Over.*'

Then silence. It expected a response from the cave, at first – since it knew that one unit of enemy often exchanged vibratory patterns with another unit of enemy. But no answer came. Perhaps the long-wave energy could not penetrate the cave to reach the thing that cringed inside.

'*Salvage Sixteen, this is Aubrey's runabout. What the devil happened to you? Can you read me? Over!*'

Tensely it listened to the ground. The purring stopped for a time as the enemy paused. Minutes later the motion resumed.

It awoke an emissary ear twenty kilometers to the south-west, and commanded the ear to listen, and to transmit the patterns of the purring noise. Two soundings were taken, and from them it

derived the enemy's precise position and velocity. The enemy was proceeding to the north, into the edge of the demiworld. Lurking anger flared into active fury. It gunned its engines on the crag. It girded itself for battle.

'*Salvage Sixteen, this is Aubrey's runabout. I assume your radio rig is inoperative. If you can hear us, get this: we're proceeding north to five miles short of magnapult range. We'll stop there and fire an autocyb rocket into zone Red-Red. The warhead's a radio-to-sonar transceiver. If you've got a seismitter that's working, the transceiver will act as a relay stage. Over.*'

It ignored the vibratory pattern and rechecked its battle gear. It introspected its energy storage, and tested its weapon activators. It summoned an emissary eye and waited a dozen minutes while the eye crawled crablike from the holy place to take up a watch-post near the entrance of the cave. If the enemy remnant tried to emerge, the emissary eye would see, and report, and it could destroy the enemy remnant with a remote grenade catapult.

The purring in the ground was louder. Having prepared itself for the fray, it came down from the crag and grumbled southward at cruising speed. It passed the gutted hulk of the Moonwagon, with its team of overturned tractors. The detonation of the magnapult canister had broken the freight-car-sized vehicle in half. The remains of several two-legged enemy appurtenances were scattered about the area, tiny broken things in the pale Earthlight. Grumbler ignored them and charged relentlessly southward.

A sudden wink of light on the southern horizon! Then a tiny dot of flame arched upwards, traversing the heavens. Grumbler skidded to a halt and tracked its path. A rocket missile. It would fall somewhere in the east half of zone Red-Red. There was no time to prepare to shoot it down. Grumbler waited – and saw that the missile would explode harmlessly in a nonvital area.

Seconds later, the missile paused in flight, reversing direction and sitting on its jets. It dropped out of sight behind an outcropping. There was no explosion. Nor was there any activity in the area where the missile had fallen. Grumbler called an emissary ear, sent it migrating towards the impact point to listen, then continued south towards the pain perimeter.

'*Salvage Sixteen, this is Aubrey's runabout,*' came the long-wave vibrations. '*We just shot the radio-seismitter relay into Red-Red. If you're within five miles of it, you should be able to hear.*'

Almost immediately, a response from the cave, heard by the emissary ear that listened to the land near the tower: '*Thank God! He he he he – Oh, thank God!*'

And simultaneously, the same vibratory pattern came in long-wave patterns from the direction of the missile-impact point. Grumbler stopped again, momentarily confused, angrily tempted to lob a magnapult canister across the broken terrain towards the impact point. But the emissary ear reported no physical movement from the area. The enemy to the south was the origin of the disturbances. If it removed the major enemy first, it could remove the minor disturbances later. It moved on to the pain perimeter, occasionally listening to the meaningless vibrations caused by the enemy.

'*Salvage Sixteen from Aubrey. I hear you faintly. Who is this, Carhill?*'

'*Aubrey! A voice – A real voice – Or am I going nuts?*'

'*Sixteen from Aubrey. Sixteen from Aubrey. Stop babbling and tell me who's talking. What's happening in there? Have you got Grumbler immobilized?*'

Spasmodic choking was the only response.

'*Sixteen from Aubrey. Snap out of it! Listen, Sawyer, I know it's you. Now get hold of yourself, man! What's happened?*'

'*Dead . . . they're all dead but me.*'

'STOP THAT IDIOTIC LAUGHING!'

A long silence, then, scarcely audible: '*O.K., I'll hold on to myself. Is it really you, Aubrey?*'

'*You're not having hallucinations, Sawyer. We're crossing zone Red in a runabout. Now tell me the situation. We've been trying to call you for days.*'

'*Grumbler let us get ten miles into zone Red-Red, and then he clobbered us with a magnapult canister.*'

'*Wasn't your I.F.F. working?*'

'*Yes, but Grumbler's isn't! After he blasted the wagon, he picked off the other four that got out alive – He he he he . . . Did you ever see a Sherman tank chase a mouse, colonel?*'

'Cut it out, Sawyer! Another giggle out of you, and I'll flay you alive.'

'Get me out! My leg! Get me out!'

'If we can. Tell me your present situation.'

'My suit . . . I got a small puncture – Had to pump the leg full of water and freeze it. Now my leg's dead. I can't last much longer.'

'The situation, Sawyer, the situation! Not your aches and pains.'

The vibrations continued, but Grumbler screened them out for a time. There was rumbling fury on an Earthlit hill.

It sat with its engines idling, listening to the distant movements of the enemy to the south. At the foot of the hill lay the pain perimeter; even upon the hilltop, it felt the faint twinges of warning that issued from the tower, thirty kilometres to the rear at the centre of the world. It was in communion with the tower. If it ventured beyond the perimeter, the communion would slip out-of-phase, and there would be blinding pain and detonation.

The enemy was moving more slowly now, creeping north across the demiworld. It would be easy to destroy the enemy at once, if only the supply of rocket missiles were not depleted. The range of the magnapult hurler was only twenty-five kilometres. The small spitters would reach, but their accuracy was close to zero at such range. It would have to wait for the enemy to come closer. It nursed a brooding fury on the hill.

'Listen, Sawyer, if Grumbler's I.F.F. isn't working, why hasn't he already fired on this runabout?'

'That's what sucked us in too, colonel. We came into zone Red and nothing happened. Either he's out of long-range ammo, or he's getting cagey, or both. Probably both.'

'Mmmp! Then we'd better park here and figure something out.'

'Listen . . . there's only one thing you can do. Call for a tele-controlled missile from the Base.'

'To destroy Grumbler? You're out of your head, Sawyer. If Grumbler's knocked out, the whole area around the excavations gets blown sky high . . . to keep them out of enemy hands. You know that.'

'You expect me to care?'

'Stop screaming, Sawyer. Those excavations are the most valuable

property on the Moon. We can't afford to lose them. That's why Grumbler was staked out. If they got blown to rubble, I'd be court-martialled before the debris quit falling.'

The response was snarling and sobbing. '*Eight hours' oxygen. Eight hours', you hear? You stupid, merciless –* '

The enemy to the south stopped moving at a distance of twenty-eight kilometres from Grumbler's hill – only three thousand metres beyond magnapult range.

A moment of berserk hatred. It lumbered to-and-fro in a frustrated pattern that was like a monstrous dance, crushing small rocks beneath its treads, showering dust into the valley. Once it charged down towards the pain perimeter, and turned back only after the agony became unbearable. It stopped again on the hill, feeling the weariness of lowered energy supplies in the storage units.

It paused to analyse. It derived a plan.

Gunning its engines, it wheeled slowly around on the hilltop, and glided down the northern slope at a stately pace. It sped northward for half a mile across the flatland, then slowed to a crawl and manoeuvred its massive bulk into a fissure, where it had cached an emergency store of energy. The battery-trailer had been freshly charged before the previous sundown. It backed into feeding position and attached the supply cables without hitching itself to the trailer.

It listened occasionally to the enemy while it drank hungrily from the energy-store, but the enemy remained motionless. It would need every erg of available energy in order to accomplish its plan. It drained the cache. Tomorrow, when the enemy was gone, it would drag the trailer back to the main feeders for recharging, when the sun rose to drive the generators once again. It kept several caches of energy at strategic positions throughout its domain, that it might never be driven into starved inability to act during the long lunar night. It kept its own house in order, dragging the trailers back to be recharged at regular intervals.

'*I don't know what I can do for you, Sawyer,*' came the noise of the enemy. '*We don't dare destroy Grumbler, and there's not another autocyber crew on the Moon. I'll have to call Terra for replacements.*

I can't send men into zone Red-Red if Grumbler's running berserk. It'd be murder.'

'*For the love of God, colonel – !*'

'*Listen, Sawyer, you're the autocyberman. You helped train Grumbler. Can't you think of some way to stop him without detonating the mined area?*'

A protracted silence. Grumbler finished feeding and came out of the fissure. It moved westward a few yards, so that a clear stretch of flat land lay between itself and the hill at the edge of the pain perimeter, half a mile away. There it paused, and awoke several emissary ears, so that it might derive the most accurate possible fix of the enemy's position. One by one, the emissary ears reported.

'*Well, Sawyer?*'

'*My leg's killing me.*'

'*Can't you think of anything?*'

'*Yeah – but it won't do me any good. I won't live that long.*'

'*Well, let's hear it.*'

'*Knock out his remote energy storage units, and then run him ragged at night.*'

'*How long would it take?*'

'*Hours – after you found all his remote supply units and blasted them.*'

It analysed the reports of the emissary ears, and calculated a precise position. The enemy runabout was 2·7 kilometers beyond the maximum range of the magnapult – as creation had envisioned the maximum. But creation was imperfect, even inside.

It loaded a canister on to the magnapult's spindle. Contrary to the intentions of creation, it left the canister *locked to the loader.* This would cause pain. But it would prevent the canister from moving during the first few microseconds after the switch was closed, while the magnetic field was still building towards full strength. It would not release the canister until the field clutched it fiercely and with full effect, thus imparting slightly greater energy to the canister. This procedure it had invented for itself, thus transcending creation.

'*Well, Sawyer, if you can't think of anything else –*'

'I DID THINK OF SOMETHING ELSE!' the answering vibrations screamed. '*Call for a telecontrolled missile! Can't you*

understand, Aubrey? Grumbler murdered eight men from your command.'

'*You taught him how, Sawyer.*'

There was a long and ominous silence. On the flat land to the north of the hill, Grumbler adjusted the elevation of the magnapult slightly, keyed the firing switch to a gyroscope, and prepared to charge. Creation had calculated the maximum range when the weapon was at a standstill.

'*He he he he he* – ' came the patterns from the thing in the cave.

It gunned its engines and clutched the drive shafts. It rolled towards the hill, gathering speed, and its mouth was full of death. Motors strained and howled. Like a thundering bull, it rumbled towards the south. It hit maximum velocity at the foot of the slope. It lurched sharply upwards. As the magnapult swept up to correct elevation, the gyroscope closed the circuit.

A surge of energy. The clutching fist of the field gripped the canister, tore it free of the loader, hurled it high over the broken terrain towards the enemy. Grumbler skidded to a halt on the hilltop.

'*Listen, Sawyer, I'm sorry, but there's nothing* – '

The enemy's voice ended with a dull snap. A flare of light came briefly from the southern horizon, and died.

'*He he he he he* – ' said the thing in the cave.

Grumbler paused.

THRRUMMMP! came the shock-wave through the rocks.

Five emissary ears relayed their recordings of the detonation from various locations. It studied them, it analysed. The detonation had occurred less than fifty metres from the enemy runabout. Satiated, it wheeled around lazily on the hilltop and rolled northward towards the centre of the world. All was well.

'*Aubrey, you got cut off,*' grunted the thing in the cave. '*Call me, you coward . . . call me. I want to make certain you hear.*'

Grumbler, as a random action, recorded the meaningless noise of the thing in the cave, studied the noise, rebroadcast it on a long-wave frequency: 'Aubrey, you got cut off. Call me, you coward . . . call me, I want to make certain you hear.'

The seismitter caught the long-wave noise and reintroduced it as vibration in the rocks.

The thing screamed in the cave. Grumbler recorded the screaming noise, and rebroadcast it several times.

'*Aubrey . . . Aubrey, where are you . . . AUBREY! Don't desert me, don't leave me here –*'

The thing in the cave became silent.

It was a peaceful night. The stars glared unceasingly from the blackness, and the pale terrain was haunted by Earthlight from the dim crescent in the sky. Nothing moved. It was good that nothing moved. The holy place was at peace in the airless world. There was blessed stasis.

Only once did the thing stir again in the cave. So slowly that Grumbler scarcely heard the sound, it crawled to the entrance and lay peering up at the steel behemoth on the crag.

It whispered faintly in the rocks.

'*I made you, don't you understand? I'm human, I made you –*'

Then with one leg dragging behind, it pulled itself out into the Earthglow and turned as if to look up at the dim crescent in the sky. Gathering fury, Grumbler stirred on the crag, and lowered the black maw of a grenade launcher.

'*I made you,*' came the meaningless noise.

It hated noise and motion. It was in its nature to hate them. Angrily, the grenade launcher spoke. And then there was blessed stasis for the rest of the night.

The Country of the Kind

DAMON KNIGHT

The attendant at the car lot was day-dreaming when I pulled up – a big, lazy-looking man in black satin chequered down the front. I was wearing scarlet, myself; it suited my mood. I got out, almost on his toes.

'Park or storage?' he asked automatically, turning around. Then he realized who I was, and ducked his head away.

'Neither,' I told him.

There was a hand torch on a shelf in the repair shed right behind him. I got it and came back. I kneeled down to where I could reach behind the front wheel, and ignited the torch. I turned it on the axle and suspension. They glowed cherry red, then white, and fused together. Then I got up and turned the flame on both tyres until the rubberoid stank and sizzled and melted down to the pavement. The attendant didn't say anything.

I left him there, looking at the mess on his nice clean concrete.

It had been a nice car, too; but I could get another any time. And I felt like walking. I went down the winding road, sleepy in the afternoon sunlight, dappled with shade and smelling of cool leaves. You couldn't see the houses; they were all sunken or hidden by shrubbery, or a little of both. That was the fad I'd heard about; it was what I'd come here to see. Not that anything the dulls did would be worth looking at.

I turned off at random and crossed a rolling lawn, went through a second hedge of hawthorn in blossom, and came out next to a big sunken games court.

The tennis net was up, and two couples were going at it, just

working up a little sweat – young, about half my age, all four of them. Three dark-haired, one blonde. They were evenly matched, and both couples played well together; they were enjoying themselves.

I watched for a minute. But by then the nearest two were beginning to sense I was there, anyhow. I walked down on to the court, just as the blonde was about to serve. She looked at me, frozen across the net, poised on tiptoe. The others stood.

'Off,' I told them. 'Game's over.'

I watched the blonde. She was not especially pretty, as they go, but compactly and gracefully put together. She came down slowly, flatfooted without awkwardness, and tucked the racquet under her arm; then the surprise was over and she was trotting off the court after the other three.

I followed their voices around the curve of the path, between towering masses of lilacs, inhaling the sweetness, until I came to what looked like a little sunning spot. There was a sundial, and a birdbath, and towels lying around on the grass. One couple, the dark-haired pair, was still in sight farther down the path, heads bobbing along. The other couple had disappeared.

I found the handle in the grass without any trouble. The mechanism responded, and an oblong section of turf rose up. It was the stair I had, not the elevator, but that was all right. I ran down the steps and into the first door I saw, and was in the top-floor lounge, an oval room lit with diffused simulated sunlight from above. The furniture was all comfortably bloated, sprawling and ugly; the carpet was deep, and there was a fresh flower scent in the air.

The blonde was over at the near end with her back to me, studying the autochef keyboard. She was half out of her playsuit. She pushed it the rest of the way down and stepped out of it, then turned and saw me.

She was surprised again; she hadn't thought I might follow her down.

I got up close before it occurred to her to move; then it was too late. She knew she couldn't get away from me; she closed her eyes and leaned back against the panelling, turning a little pale. Her lips and her golden brows went up in the middle.

I looked her over and told her a few uncomplimentary things

about herself. She trembled, but didn't answer. On impulse, I leaned over and dialled the autochef to hot cheese sauce. I cut the safety out of circuit and put the quantity dial all the way up. I dialled *soup tureen* and then *punch bowl.*

The stuff began to come out in about a minute, steaming hot. I took the tureens and splashed them up and down the wall on either side of her. Then, when the first punch bowl came out, I used the empty bowls as scoops. I clotted the carpet with the stuff; I made streamers of it all along the walls, and dumped puddles into what furniture I could reach. Where it cooled it would harden, and where it hardened it would cling.

I wanted to splash it across her body, but it would've hurt, and we couldn't have that. The punch bowls of hot sauce were still coming out of the autochef, crowding each other around the vent. I punched *cancel,* and then *port wine.*

It came out well chilled in open bottles. I took the first one and had my arm back just about to throw a nice line of the stuff right across her midriff, when a voice said behind me:

'Watch out for cold wine.'

My arm twitched and a little stream of the wine splashed across her thighs. She was ready for it; her eyes had opened at the voice, and she barely jumped.

I whirled around, fighting mad. The man was standing there where he had come out of the stair-well. He was thinner in the face than most, bronzed, wide-chested, with alert blue eyes. If it hadn't been for him, I knew it would have worked – the blonde would have mistaken the cold splash for a hot one.

I could hear the scream in my mind, and I wanted it.

I took a step towards him, and my foot slipped. I went down clumsily, wrenching one knee. I got up shaking and tight all over. I wasn't in control of myself. I screamed, 'You – you – '. I turned and got one of the punch bowls and lifted it in both hands, heedless of how the hot sauce was slopping over on to my wrists, and I had it almost in the air towards him when the sickness took me – that damned buzzing in my head, louder, louder, drowning everything out.

When I came to, they were both gone. I got up off the floor, weak as death, and staggered over to the nearest chair. My clothes

were slimed and sticky. I wanted to die. I wanted to drop into that dark furry hole that was yawning for me and never come up; but I made myself stay awake and get out of the chair.

Going down in the elevator, I almost blacked out again. The blonde and the thin man weren't in any of the second-floor bedrooms. I made sure of that, and then I emptied the closets and bureau drawers on to the floor, dragged the whole mess into one of the bathrooms and stuffed the tub with it, then turned on the water.

I tried the third floor: maintenance and storage. It was empty. I turned the furnace on and set the thermostat up as high as it would go. I opened the freezer doors and dialled them to defrost. I propped the stair-well door open and went back up in the elevator.

On the second floor I stopped long enough to open the stairway door there – the water was halfway towards it, creeping across the floor – and then searched the top floor. No one was there. I opened book reels and threw them unwinding across the room; I would have done more, but I could hardly stand. I got up to the surface and collapsed on the lawn; that furry pit swallowed me up, dead and drowned.

While I slept, water poured down the open stair-well and filled the third level. Thawing food packages floated out into the rooms. Water seeped into wall panels and machine housings; circuits shorted and fuses blew. The air conditioning stopped, but the pile kept heating. The water rose.

Spoiled food, floating supplies, grimy water surged up the stair-well. The second and first levels were bigger and would take longer to fill, but they'd fill. Rugs, furnishings, clothing, all the things in the house would be waterlogged and ruined. Probably the weight of so much water would shift the house, rupture water pipes and other fluid intakes. It would take a repair crew more than a day just to clean up the mess. The house itself was done for, not repairable. The blonde and the thin man would never live in it again.

Serve them right.

The dulls could build another house; they built like beavers. There was only one of me in the world.

The earliest memory I have is of some woman, probably the

crèchemother, staring at me with an expression of shock and horror. Just that. I've tried to remember what happened directly before or after, but I can't. Before, there's nothing but the dark formless shaft of no-memory that runs back to birth. Afterwards, the big calm.

From my fifth year, it must have been, to my fifteenth, everything I can remember floats in a pleasant dim sea. Nothing was terribly important. I was languid and soft; I drifted. Waking merged into sleep.

In my fifteenth year it was the fashion in love-play for the young people to pair off for months or longer. 'Loving steady,' we called it. I remember how the older people protested that it was unhealthy; but we were all normal juniors, and nearly as free as adults under law.

All but me.

The first steady girl I had was named Elen. She had blonde hair, almost white, worn long; her lashes were dark and her eyes pale green. Startling eyes: they didn't look as if they were looking at you. They looked blind.

Several times she gave me strange startled glances, something between fright and anger. Once it was because I held her too tightly, and hurt her; other times, it seemed to be for nothing at all.

In our group, a pairing that broke up sooner than four weeks was a little suspect – there must be something wrong with one partner or both, or the pairing would have lasted longer.

Four weeks and a day after Elen and I made our pairing, she told me she was breaking it.

I'd thought I was ready. But I felt the room spin half around me till the wall came against my palm and stopped.

The room had been in use as a hobby chamber; there was a rack of plasticraft knives under my hand. I took one without thinking, and when I saw it I thought, *I'll frighten her.*

And I saw the startled, half-angry look in her pale eyes as I went towards her; but this is curious: she wasn't looking at the knife. She was looking at my face.

The elders found me later with the blood on me, and put me into a locked room. Then it was my turn to be frightened, because I

realized for the first time that it was possible for a human being to do what I had done. And if I could do it to Elen, I thought, surely they could do it to me.

But they couldn't. They set me free: they had to.

And it was then I understood that I was the king of the world.

Something else in me, that had been suppressed and forgotten, rose up with my first blow struck in anger. The sculpture began years afterwards, as an accident; but in that moment I was free, and I was an artist.

One winter, in the A.C. Archives in Denver, I found a storeroom full of old printed books. I spent months there, reading them, because until then I'd thought I had invented sculpture and drawing. The thing I chiefly wanted to know was, why had it stopped? There was no answer in so many words in any of the books. But reading the histories of those times before the Interregnum, I found one thing that might explain it. Whenever there was a long period of peace and plenty anywhere in the ancient world, art grew poor: decoration, genre painting, imitations of imitations. And as for the great artists, they all belonged to violent periods – Praxiteles, da Vinci, Rembrandt van Rijn, Renoir, Picasso . . .

It had been bred out of the race, evidently. I don't suppose the genetic planners wanted to get rid of it, but they would have shed almost anything to make a homogeneous, rational, sane, and healthy world.

So there was only one man to carve the portrait of the Age of Reason. All right; I would have been content, only . . .

The sky was turning clear violet when I woke up, and shadow was spilling out from the hedges. I went down the hill until I saw the ghostly blue of photon tubes glowing in a big oblong, just outside the commerce area. I went that way, by habit.

Other people were lining up at the entrance to show their books and be admitted. I brushed by them, seeing the shocked faces and feeling their bodies flinch away, and went on into the robing chamber.

Straps, aqualungs, masks, and flippers were all for the taking. I stripped, dropping the clothes where I stood, and put the underwater equipment on. I strode out to the poolside, monstrous, like

a being from another world. I adjusted the lung and the flippers, and slipped into the water.

Underneath it was all crystal blue, with the forms of swimmers sliding through it like pale angels. Schools of small fish scattered as I went down. My heart was beating with a painful joy.

Down, far down, I saw a girl slowly undulating through the motions of a sinuous underwater dance, writhing around and around a ribbed column of imitation coral. She had a suction-tipped fish lance in her hand, but she was not using it; she was only dancing, all by herself, down at the bottom of the water.

I swam after her. She was young and delicately made, and when she saw the deliberately clumsy motions I made in imitation of hers, her eyes glinted with amusement behind her mask. She bowed to me in mockery, and slowly glided off with simple, exaggerated movements, like a child's ballet.

I followed. Around her and around I swam, stiff-legged, first more child-like and awkward than she, then subtly parodying her motions; then improvising on them until I was dancing an intricate, mocking dance around her.

I saw her eyes widen. She matched her rhythm to mine, then, and together, apart, together again we coiled the wake of our dancing. At last, exhausted, we clung together where a bridge of plastic coral arched over us. Her cool body was in the bend of my arm; behind two thicknesses of vitrin – a world away! – her eyes were friendly and kind.

There was a moment when, two strangers yet one flesh, we felt our souls speak to one another across that abyss of matter. It was a truncated embrace – we could not kiss, we could not speak – but her hands lay confidingly on my shoulders, and her eyes looked into mine.

That moment had to end. She gestured towards the surface, and left me. I followed her up. I was feeling drowsy and almost at peace, after my sickness. I thought . . . I don't know what I thought.

We rose together at the side of the pool. She turned to me, removing her mask: and her smile stopped, and melted away. She stared at me with a horrified disgust, wrinkled her nose.

'*Pyah!*' she said, and turned, awkward in her flippers. Watching

her, I saw her fall into the arms of a white-haired man, and heard her hysterical voice tumbling over itself.

'But don't you remember?' the man's voice rumbled. 'You should know it by heart.' He turned. 'Hal, is there a copy in the clubhouse?'

A murmur answered him, and in a few moments a young man came out holding a slender brown pamphlet.

I knew that pamphlet. I could even have told you what page the white-haired man opened it to; what sentences the girl was reading as I watched.

I waited. I don't know why.

I heard her voice rising: 'To think that I let him *touch* me!' And the white-haired man reassured her, the words rumbling, too low to hear. I saw her back straighten. She looked across at me . . . only a few yards in that scented, blue-lit air; a world away . . . and folded up the pamphlet into a hard wad, threw it, and turned on her heel.

The pamphlet landed almost at my feet. I touched it with my toe, and it opened to the page I had been thinking of:

. . . sedation until his fifteenth year, when for sexual reasons it became no longer practicable. While the advisers and medical staff hesitated, he killed a girl of the group by violence.

And farther down:

The solution finally adopted was threefold.

1. *A Sanction* – the only sanction possible to our humane, permissive society. Excommunication: not to speak to him, touch him willingly, or acknowledge his existence.

2. *A precaution.* Taking advantage of a mild predisposition to epilepsy, a variant of the so-called Kusko analogue technique was employed, to prevent by an epileptic seizure any future act of violence.

3. *A warning.* A careful alteration of his body chemistry was effected to make his exhaled and exuded wastes emit a strongly pungent and offensive odour. In mercy, he himself was rendered unable to detect this smell.

Fortunately, the genetic and environmental accidents which combined to produce this atavism have been fully explained and can never again . . .

The words stopped meaning anything, as they always did at this point. I didn't want to read any farther; it was all nonsense, anyway. I was the king of the world.

I got up and went away, out into the night, blind to the dulls who thronged the rooms I passed.

Two squares away was the commerce area. I found a clothing outlet and went in. All the free clothes in the display cases were drab: those were for worthless floaters, not for me. I went past them to the specials, and found a combination I could stand – silver and blue, with a severe black piping down the tunic. A dull would have said it was 'nice'. I punched for it. The automatic looked me over with its dull glassy eye, and croaked, 'Your contribution book, please.'

I could have had a contribution book, for the trouble of stepping out into the street and taking it away from the first passer-by; but I didn't have the patience. I picked up the one-legged table from the refreshment nook, hefted it, and swung it at the cabinet door. The metal shrieked and dented opposite the catch. I swung once more to the same place, and the door sprang open. I pulled out clothing in handfuls till I got a set that would fit me.

I bathed and changed, and then went prowling in the big multi-outlet down the avenue. All those places are arranged pretty much alike, no matter what the local managers do to them. I went straight to the knives, and picked out three in graduated sizes, down to the size of my finger-nail. Then I had to take my chance. I tried the furniture department, where I had had good luck once in a while; but this year all they were using was metal. I had to have seasoned wood.

I knew where there was a big cache of cherry wood, in goodsized blocks, in a forgotten warehouse up north at a place called Kootenay. I could have carried some around with me – enough for years – but what for, when the world belonged to me?

It didn't take me long. Down in the workshop section, of all places, I found some antiques – tables and benches, all with wooden tops. While the dulls collected down at the other end of the room, pretending not to notice, I sawed off a good oblong chunk of the smallest bench, and made a base for it out of another.

As long as I was there, it was a good place to work, and I could eat and sleep upstairs, so I stayed.

I knew what I wanted to do. It was going to be a man, sitting with his legs crossed and his forearms resting down along his calves. His head was going to be tilted back, and his eyes closed, as if he were turning his face up to the sun.

In three days it was finished. The trunk and limbs had a shape that was not man and not wood, but something in between: something that hadn't existed before I made it.

Beauty. That was the old word.

I had carved one of the figure's hands hanging loosely, and the other one curled shut. There had to be a time to stop and say it was finished. I took the smallest knife, the one I had been using to scrape the wood smooth, and cut away the handle and ground down what was left of the shaft to a thin spike. Then I drilled a hole into the wood of the figurine's hand, in the hollow between thumb and curled finger. I fitted the knife blade in there; in the small hand it was a sword.

I cemented it in place. Then I took the sharp blade and stabbed my thumb, and smeared the blade.

I hunted most of that day, and finally found the right place – a niche in an outcropping of striated brown rock, in a little triangular half-wild patch that had been left where two roads forked. Nothing was permanent, of course, in a community like this one that might change its houses every five years or so, to follow the fashion; but this spot had been left to itself for a long time. It was the best I could do.

I had the paper ready: it was one of a batch I had printed up a year ago. The paper was treated, and I knew it would stay legible a long time. I hid a little photo capsule in the back of the niche, and ran the control wire to a staple in the base of the figurine. I put the figurine down on top of the paper, and anchored it lightly to the rock with two spots of all-cement. I had done it so often that it came naturally; I knew just how much cement would hold the figurine steady against a casual hand, but yield to one that really wanted to pull it down.

Then I stepped back to look: and the power and the pity of it made my breath come short, and tears start to my eyes.

Reflected light gleamed fitfully on the dark-stained blade that hung from his hand. He was sitting alone in that niche that closed him in like a coffin. His eyes were shut, and his head tilted back, as if he were turning his face up to the sun.

But only rock was over his head. There was no sun for him.

Hunched on the cool bare ground under a pepper tree, I was looking down across the road at the shadowed niche where my figurine sat.

I was all finished here. There was nothing more to keep me, and yet I couldn't leave.

People walked past now and then – not often. The community seemed half deserted, as if most of the people had flocked off to a surf party somewhere, or a contribution meeting, or to watch a new house being dug to replace the one I had wrecked . . . There was a little wind blowing towards me, cool and lonesome in the leaves.

Up the other side of the hollow there was a terrace, and on that terrace, half an hour ago, I had seen a brief flash of colour – a boy's head, with a red cap on it, moving past and out of sight.

That was why I had to stay. I was thinking how that boy might come down from his terrace and into my road, and passing the little wild triangle of land, see my figurine. I was thinking he might not pass by indifferently, but stop: and go closer to look: and pick up the wooden man: and read what was written on the paper underneath.

I believed that sometime it had to happen. I wanted it so hard that I ached.

My carvings were all over the world, wherever I had wandered. There was one in Congo City, carved of ebony, dusty-black; one in Cyprus, of bone; one in New Bombay, of shell; one in Changteh, of jade.

They were like signs printed in red and green, in a colour-blind world. Only the one I was looking for would even pick one of them up, and read the message I knew by heart.

TO YOU WHO CAN SEE, the first sentence said. I OFFER YOU A WORLD . . .

There was a flash of colour up on the terrace. I stiffened. A

minute later, here it came again, from a different direction: it was the boy, clambering down the slope, brilliant against the green, with his red, sharp-billed cap like a woodpecker's head.

I held my breath.

He came towards me through the fluttering leaves, ticked off by pencils of sunlight as he passed. He was a brown boy, I could see at this distance, with a serious thin face. His ears stuck out, flickering pink with the sun behind them, and his elbow and knee pads made him look knobbly.

He reached the fork in the road, and chose the path on my side. I huddled into myself as he came nearer. *Let him see it, let him not see me*, I thought fiercely.

My fingers closed around a stone.

He was nearer, walking jerkily with his hands in his pockets, watching his feet mostly.

When he was almost opposite me, I threw the stone.

It rustled through the leaves below the niche in the rock. The boy's head turned. He stopped, staring; I think he saw the figurine then. I'm sure he saw it.

He took one step.

'Risha!' came floating down from the terrace.

And he looked up. 'Here,' he piped.

I saw the woman's head, tiny at the top of the terrace. She called something I didn't hear; I was standing up, squeezed tight with anger.

Then the wind shifted. It blew from me to the boy. He whirled around, his eyes big, and clapped a hand to his nose.

'Oh, what a stench!'

He turned to shout, 'Coming!' and then he was gone, hurrying back up the road, into the unstable blur of green.

My one chance, ruined. He would have seen the image, I knew, if it hadn't been for the damned woman, and the wind shifting . . . They were all against me, people, wind and all.

And the figurine still sat, blind eyes turned up to the rocky sky.

There was something inside me that told me to take my disappointment and go away from there, and not come back.

I knew I would be sorry. I did it anyway: took the image out of

the niche, and the paper with it, and climbed the slope. At the top I heard his clear voice laughing.

There was a thing that might have been an ornamental mound, or the camouflaged top of a buried house. I went around it, tripping over my own feet, and came upon the boy kneeling on the turf. He was playing with a brown and white puppy.

He looked up with the laughter going out of his face. There was no wind, and he could smell me. I knew it was bad. No wind, and the puppy to distract him – everything about it was wrong. But I went to him blindly anyhow, and fell on one knee, and shoved the figurine at his face.

'Look – ' I said.

He went over backwards in his hurry: he couldn't even have seen the image, except as a brown blur coming at him. He scrambled up, with the puppy whining and yapping around his heels, and ran for the mound.

I was up after him, clawing up moist earth and grass as I rose. In the other hand I still had the image clutched, and the paper with it.

A door popped open and swallowed him and popped shut again in my face. With the flat of my hand I beat the vines around it until I hit the doorplate by accident and the door opened. I dived in, shouting, 'Wait,' and was in a spiral passage, lit pearl-grey, winding downwards. Down I went headlong, and came out at the wrong door – an underground conservatory, humid and hot under the yellow lights, with dripping rank leaves in long rows. I went down the aisle raging, overturning the tanks, until I came to a vestibule and an elevator.

Down I went again to the third level and a labyrinth of guest rooms, all echoing, all empty. At last I found a ramp leading upwards, past the conservatory, and at the end of it voices.

The door was clear vitrin, and I paused on the near side of it looking and listening. There was the boy, and a woman old enough to be his mother, just – sister or cousin, more likely – and an elderly woman in a hard chair holding the puppy. The room was comfortable and tasteless, like other rooms.

I saw the shock grow on their faces as I burst in: it was always the same, they knew I would like to kill them, but they never expected that I would come uninvited into a house. It was not done.

There was that boy, so close I could touch him, but the shock of all of them was quivering in the air, smothering, like a blanket that would deaden my voice. I felt I had to shout.

'Everything they tell you is lies!' I said. 'See here – here, this is the truth!' I had the figurine in front of his eyes, but he didn't see.

'Risha, go below,' said the young woman quietly. He turned to obey, quick as a ferret. I got in front of him again. 'Stay,' I said, breathing hard. 'Look –'

'Remember, Risha, don't speak,' said the woman.

I couldn't stand any more. Where the boy went I don't know; I ceased to see him. With the image in one hand and the paper with it, I leaped at the woman. I was almost quick enough; I almost reached her; but the buzzing took me in the middle of a step, louder, louder, like the end of the world.

It was the second time that week. When I came to, I was sick and too faint to move for a long time.

The house was silent. They had gone, of course . . . the house had been defiled, having me in it. They wouldn't live here again, but would build elsewhere.

My eyes blurred. After a while I stood up and looked around at the room. The walls were hung with a grey close-woven cloth that looked as if it would tear, and I thought of ripping it down in strips, breaking furniture, stuffing carpets and bedding into the oubliette . . . But I didn't have the heart for it. I was too tired.

At last I stooped and picked up the figurine, and the paper that was supposed to go under it – crumpled now, with the forlorn look of a message that someone has thrown away unread.

I smoothed it out and read the last part.

YOU CAN SHARE THE WORLD WITH ME. THEY CAN'T STOP YOU. STRIKE NOW – PICK UP A SHARP THING AND STAB, OR A HEAVY THING AND CRUSH. THAT'S ALL. THAT WILL MAKE YOU FREE. ANYONE CAN DO IT.

Anyone. Anyone.

MS Found in a Chinese Fortune Cookie

C. M. KORNBLUTH

They say I am mad, but I am not mad – damn it, I've written and sold two million words of fiction and I know better than to start a story like that, but this isn't a story and they *do* say I'm mad – catatonic schizophrenia with assaultive episodes – and I'm *not.* (*This is clearly the first of the Corwin Papers. Like all the others it is written on a Riz-La cigarette paper with a ballpoint pen. Like all the others it is headed:* Urgent. Finder please send to C. M. Kornbluth, Wantagh, N.Y. Reward! *I might comment that this is typical of Corwin's generosity with his friends' time and money, though his attitude is at least this once justified by his desperate plight. As his longtime friend and, indeed, literary executor, I was clearly the person to turn to. C.M.K.*) I have to convince you, Cyril, that I am both sane and the victim of an enormous conspiracy – and that you are too, and that everybody is. A tall order, but I am going to try to fill it by writing an orderly account of the events leading up to my present situation. (*Here ends the first paper. To keep the record clear I should state that it was forwarded to me by a Mr L. Wilmot Shaw, who found it in a fortune cookie he ordered for dessert at the Great China Republic Restaurant in San Francisco. Mr Shaw suspected it was 'a publicity gag' but sent it to me nonetheless, and received by return mail my thanks and my cheque for one dollar. I had not realized that Corwin and his wife had disappeared from their home at Painted Post; I was merely aware that it had been weeks since I'd heard from him. We visited infrequently. To be blunt, he was easier to take via mail than face to face. For the balance of this account I shall attempt to avoid tedium*

by omitting the provenance of each paper, except when noteworthy, and its length. The first is typical – a little over a hundred words. I have, of course, kept on file all correspondence relating to the papers, and am eager to display it to the authorities. It is hoped that publication of this account will nudge them out of the apathy with which they have so far greeted my attempts to engage them. C.M.K.)

On Sunday, 13 May 1956, at about 12.30 p.m., I learned The Answer. I was stiff and aching because all Saturday my wife and I had been putting in young fruit trees. I like to dig, but I was badly out of condition from an unusually long and idle winter. Creatively, I felt fine. I'd been stale for months, but when spring came the sap began to run in me too. I was bursting with story ideas; scenes and stretches of dialogue were jostling one another in my mind; all I had to do was let them flow on to paper.

When The Answer popped into my head I thought at first it was an idea for a story – a very good story. I was going to go downstairs and bounce it off my wife a few times to test it, but I heard the sewing machine buzzing and remembered she had said she was way behind on her mending. Instead, I put my feet up, stared blankly through the window at the pasture-and-wooded-hills view we'd bought the old place for, and fondled the idea.

What about, I thought, using the idea to develop a messy little local situation, the case of Mrs Clonford? Mrs C. is a neighbour, animal-happy, land-poor and unintentionally a fearsome oppressor of her husband and children. Mr C. is a retired brakeman with a pension and his wife insists on him making like a farmer in all weathers and every year he gets pneumonia and is pulled through with antibiotics. All he wants is to sell the damned farm and retire with his wife to a little apartment in town. All *she* wants is to mess around with her cows and horses and sub-marginal acreage.

I got to thinking that if you noised the story around *with* a comment based on The Answer, the situation would automatically untangle. They'd get their apartment, sell the farm, and everybody would be happy, including Mrs C. It would be interesting to write, I thought idly, and then I thought not so idly that it would be interesting to *try* – and then I sat up sharply with a dry mouth and a systemful of adrenalin. *It would work.* The Answer would work.

I ran rapidly down a list of other problems, ranging from the town drunk to the guided-missile race. The Answer worked. Every time.

I was quite sure I had turned paranoid, because I've seen so much of that kind of thing in science fiction. Anybody can name a dozen writers, editors, and fans who have suddenly seen the light and determined to lead the human race onward and upward out of the old slough. Of course The Answer looked logical and unassailable, but so no doubt did poor Charlie McGandress's project to unite mankind through science fiction fandom, at least to him. So, no doubt, did (*I have here omitted several briefly sketched case histories of science fiction personalities as yet uncommitted. The reason will be obvious to anyone familiar with the law of libel. Suffice it to say that Corwin argues that science fiction attracts an unstable type of mind and sometimes insidiously undermines its foundations in reality. C.M.K.*)

But I couldn't just throw it away without a test. I considered the wording carefully, picked up the extension phone on my desk and dialled Jim Howlett, the appliance dealer in town. He answered. 'Corwin here, Jim,' I told him. 'I have an idea – ooops! The samovar's boiling over. Call me back in a minute, will you?' I hung up.

He called me back in a minute; I let our combination – two shorts and a long – ring three times before I picked up the phone. 'What was that about a samovar?' he asked, baffled.

'Just kidding,' I said. 'Listen, Jim, why don't you try a short story for a change of pace? Knock off the novel for a while – ' He's hopefully writing a big historical about the Sullivan Campaign of 1779, which is our local chunk of the Revolutionary War; I'm helping him a little with advice. Anybody who wants as badly as he does to get out of the appliance business is entitled to some help.

'Gee, I don't know,' he said. As he spoke the volume of his voice dropped slightly, but definitely, three times. That meant we had an average quota of party-line snoopers listening in. 'What would I write about?'

'Well, we have this situation with a neighbour, Mrs Clonford,' I began. I went through the problem and made my comment based on The Answer. I heard one of the snoopers gasp. Jim said when I

was finished: 'I don't really think it's for me, Cecil. Of course it was nice of you to call, but – '

Eventually a customer came into the store and he had to break off.

I went through an anxious crabby twenty-four hours.

On Monday afternoon the paper woman drove past our place and shot the rolled-up copy of the Pott Hill *Evening Times* into the orange-painted tube beside our mailbox. I raced for it, yanked it open to the seventh page and read:

FARM SALE

Owing to Ill Health and Age
Mr and Mrs Ronald Clonford
Will sell their Entire Farm, All
Machinery and Furnishings and
All Live Stock at Auction Sat-
urday 19 May 12.30 p.m. Rain
or Shine, Terms Cash Day of
Sale, George Pfennig,
Auctioneer.

(*This is one of the few things in the Corwin Papers which can be independently verified. I looked up the paper and found that the ad was run about as quoted. Further, I interviewed Mrs Clonford in her town apartment. She told me she 'just got tired of farmin', I guess. Kind of hated to give up my ponies, but people was beginning to say it was too hard a life for Ronnie and I guess they was right.'* C.M.K.)

Coincidence? Perhaps. I went upstairs with the paper and put my feet up again. I could try a hundred more piddling tests if I wished, but why waste time? If there was anything to it, I could type out The Answer in about two hundred words, drive to town, tack it on the bulletin board outside the firehouse and – snowball. Avalanche!

I didn't do it, of course – for the same reason I haven't put down the two hundred words of The Answer yet on a couple of these cigarette papers. It's rather dreadful – isn't it – that I haven't done so, that a simple feasible plan to ensure peace, progress, and equality

of opportunity among all mankind may be lost to the world if, say, a big meteorite hits the asylum in the next couple of minutes. But – I'm a writer. There's a touch of intellectual sadism in us. We like to dominate the reader as a matador dominates the bull; we like to tease and mystify and at last show what great souls we are by generously flipping up the shade and letting the sunshine in. Don't worry. Read on. You will come to The Answer in the proper artistic place for it. (*At this point I wish fervently to dissociate myself from the attitudes Corwin attributes to our profession. He had – has, I hope – his eccentricities, and I consider it inexcusable of him to tar us all with his personal brush. I could point out, for example, that he once laboriously cultivated a sixteenth-century handwriting which was utterly illegible to the modern reader. The only reason apparent for this, as for so many of his traits, seemed to be a wish to annoy as many people as possible. C.M.K.*)

Yes; I am a writer. A matador does not show up in the bullring with a tommy gun and a writer doesn't do things the simple, direct way. He makes the people writhe a little first. So I called Fred Greenwald. Fred had been after me for a while to speak at one of the Thursday Rotary meetings and I'd been reluctant to set a date. I have a little speech for such occasions, 'The Business of Being a Writer' – all about the archaic royalty system of payment, the difficulty of proving business expenses, the Margaret Mitchell tax law and how it badly needs improvement, what copyright is and isn't, how about all these generals and politicians with their capital-gains memoirs. I pass a few galley sheets down the table and generally get a good laugh by holding up a Doubleday book contract, silently turning it over so they can see how the fine print goes on and on, and then flipping it open so they see there's twice as much fine print as they thought there was. I had done my stuff for Oswego Rotary, Horseheads Rotary, and Cannon Hole Rotary; now Fred wanted me to do it for Painted Post Rotary.

So I phoned him and said I'd be willing to speak this coming Thursday. 'Good,' he said. On a discovery I'd made about the philosophy and technique of administration and interpersonal relationships, I said. He sort of choked up and said, 'Well, we're broad-minded here.'

I've got to start cutting this. I have several packs of cigarette

papers left but not enough to cover the high spots if I'm to do them justice. Let's just say the announcement of my speech was run in the Tuesday paper (*It was. C.M.K.*) and skip to Wednesday, my place, about 7.30 p.m. Dinner was just over and my wife and I were going to walk out and see how (*At this point I wish to insert a special note concerning some difficulty I had in obtaining the next four papers. They got somehow into the hands of a certain literary agent who is famous for a sort of 'finders-keepers' attitude more appropriate to the eighth grade than to the law of literary property. In disregard of the fact that Corwin retained ownership of the papers and literary rights thereto, and that I as the addressee possessed all other rights, he was blandly endeavouring to sell them to various magazines as 'curious fragments from Corwin's desk'. Like most people, I abhor lawsuits; that's the fact this agent lives on. I met his outrageous price of five cents a word 'plus postage (!)'. I should add that I have not heard of any attempt by this gentleman to locate Corwin or his heirs in order to turn over the proceeds of the sale, less commission. C.M.K.*) the new fruit trees were doing when a car came bumping down our road and stopped at our garden fence gate.

'See what they want and shove them on their way,' said my wife. 'We haven't got much daylight left.' She peered through the kitchen window at the car, blinked, rubbed her eyes and peered again. She said uncertainly: 'It looks like – no! Can't be.' I went out to the car.

'Anything I can do for you?' I asked the two men in the front seat. Then I recognized them. One of them was about my age, a wiry lad in a T-shirt. The other man was plump and greying and ministerial, but jolly. They were unmistakable; they had looked out at me – one scowling, the other smiling – from a hundred book ads. It was almost incredible that they knew each other, but there they were sharing a car.

I greeted them by name and said: 'This is odd. I happen to be a writer myself. I've never shared the best-seller list with you two, but – '

The plump ministerial man tut-tutted. 'You are thinking negatively,' he chided me. 'Think of what you *have* accomplished. You own this lovely home, the valuation of which has just been

raised two thousand dollars due entirely to the hard work and frugality of you and your lovely wife; you give innocent pleasure to thousands with your clever novels; you help to keep the good local merchants going with your patronage. Not least, you have fought for your country in the wars and you support it with your taxes.'

The man in the T-shirt said raspily: 'Even if you didn't have the dough to settle in full on 15 April and will have to pay six per cent per month interest on the unpaid balance when and if you ever do pay it, you poor shnook.'

The plump man said, distressed: 'Please, Michael – you are not thinking positively. This is neither the time nor the place – '

'What's going on?' I demanded. Because I hadn't even told my *wife* I'd been a little short on the '55 federal tax.

'Let's go inna house,' said the T-shirted man. He got out of the car, brushed my gate open and walked coolly down the path to the kitchen door. The plump man followed, sniffing our rose-scented garden air appreciatively, and I came last of all, on wobbly legs.

When we filed in my wife said: 'My God. It *is* them.'

The man in the T-shirt said: 'Hiya, babe,' and stared at her breasts. The plump man said: 'May I compliment you, my dear, for a splendid rose garden. Quite unusual for this altitude.'

'Thanks,' she said faintly, beginning to rally. 'But it's quite easy when your neighbours keep horses.'

'Haw!' snorted the man in the T-shirt. 'That's the stuff, babe. You grow roses like I write books. Give 'em plenty of – '

'Michael!' said the plump man.

'*Look*, you,' my wife said to me. 'Would you mind telling me what this is all about? I never knew you knew Dr – '

'I don't,' I said helplessly. 'They seem to want to talk to me.'

'Let us adjourn to your *sanctum sanctorum*,' said the plump man archly, and we went upstairs. The T-shirted man sat on the couch, the plump fellow sat in the club chair and I collapsed on the swivel chair in front of the typewriter. 'Drink, anybody?' I asked, wanting one myself. 'Sherry, brandy, rye, straight angostura?'

'Never touch the stinking stuff,' grunted the man in the T-shirt.

'I would enjoy a nip of brandy,' said the big man. We each had one straight, no chasers, and he got down to business with: 'I suppose you have discovered The Diagonal Relationship?'

I thought about The Answer, and decided that The Diagonal Relationship would be a very good name for it too. 'Yes,' I said. 'I guess I have. Have you?'

'I have. So has Michael here. So have one thousand, seven hundred and twenty-four writers. If you'd like to know who they are, pick the one thousand, seven hundred and twenty-four top-income men of the ten thousand free-lance writers in this country and you have your men. The Diagonal Relationship is discovered on an average of three times a year by rising writers.'

'Writers,' I said. 'Good God, why *writers*? Why not economists, psychologists, mathematicians – *real* thinkers?'

He said: 'A writer's mind is an awesome thing, Corwin. What went into your discovery of The Diagonal Relationship?'

I thought a bit. 'I'm doing a Civil War thing about Burnside's Bomb,' I said, 'and I realized that Grant could have sent in fresh troops but didn't because Halleck used to drive him crazy by telegraphic masterminding of his campaigns. That's a special case of The Answer – as I call it. Then I got some data on medieval attitudes towards personal astrology out of a book on ancient China I'm reading. Another special case. And there's a joke the monks used to write at the end of a long manuscript-copying job. Liddell Hart's theory of strategy is about half of the general military case of The Answer. The merchandising special case shows clearly in a catalogue I have from a Chicago store that specializes in selling strange clothes to bop-crazed Negroes. They all add up to the general expression, and that's that.'

He was nodding. 'Many, many combinations add up to The Diagonal Relationship,' he said. 'But only a writer cuts across sufficient fields, exposes himself to sufficient apparently unrelated facts. Only a writer has wide-open associational channels capable of bridging the gap between astrology and, ah, "bop". We write in our different idioms' – he smiled at the T-shirted man – 'but we are writers all. Wide-ranging, omnivorous for data, equipped with superior powers of association, which we constantly exercise.'

'Well,' I asked logically enough, 'why on earth haven't you published The Diagonal Relationship? Are you here to keep me from publishing it?'

'We're a power group,' said the plump man apologetically. 'We

have a vested interest in things as they are. Think about what The Diagonal Relationship would do to writers, Corwin.'

'Sure,' I said, and thought about it. 'Judas Priest!' I said after a couple of minutes. He was nodding again. He said: 'Yes. The Diagonal Relationship, if generally promulgated, would work out to approximate equality of income for all, with incentive pay only for really hard and dangerous work. Writing would be regarded as pretty much its own reward.'

'That's the way it looks,' I said. 'One-year copyright, after all. . .'

(Here occurs the first hiatus in the Corwin Papers. I suspect that three or four are missing. The preceding and following papers, incidentally, come from a batch of six gross of fortune cookies which I purchased from the Hip Sing Restaurant Provision Company of New York City during the course of my investigations. The reader no doubt will wonder why I was unable to determine the source of the cookies themselves and was forced to buy them from middlemen. Apparently the reason is the fantastic one that by chance I was wearing a white shirt, dark tie, and double-breasted blue serge suit when I attempted to question the proprietor of the Hip Sing Company. I learned too late that this is just about the unofficial uniform of U.S. Treasury and Justice Department agents and that I was immediately taken to be such an agent. 'You T-man,' said Mr Hip tolerantly, 'you get cou't oh-dah, I show you books. Keep ve'y nice books, all in Chinese cha'ctahs.' After that gambit he would answer me only in Chinese. How he did it I have no idea, but apparently within days every Chinese produce dealer in the United States and Canada had been notified that there was a new T-man named Kornbluth on the prowl. As a last resort I called on the New York City office of the Treasury Department Field Investigations Unit in an attempt to obtain what might be called un-identification papers. There I was assured by Mr Gershon O'Brien, their Chinese specialist, that my errand was hopeless since the motto of Mr Hip and his colleagues invariably was 'Safety First'. To make matters worse, as I left his office I was greeted with a polite smile from a Chinese lad whom I recognized as Mr Hip's book-keeper. C.M.K.)

'So you see,' he went on as if he had just stated a major and a minor premiss, 'we watch the writers, the real ones, through private detective agencies, which alert us when the first teaser

appears in a newspaper or on a broadcast or in local gossip. There's always the teaser, Corwin, the rattle before the strike. We writers are like that. We've been watching you for three years now and, to be perfectly frank, I've lost a few dollars wagered on you. In my opinion you're a year late.'

'What's the proposition?' I asked numbly.

He shrugged. 'You get to be a best-seller. We review your books, you review ours. We tell your publisher: "Corwin's hot – promote him. Advertise him." And he does, because we're good properties and he doesn't want to annoy us. You want Hollywood? It can be arranged. Lots of us out there. In short, you become rich like us and all you have to do is keep quiet about The Diagonal Relationship. You haven't told your wife, by the way?'

'I wanted to surprise her,' I said.

He smiled. 'They always do. Writers! Well, young man, what do you say?'

It had grown dark. From the couch came a raspy voice: 'You heard what the doc said about the ones that throw in with us. I'm here to tell you that we got provisions for the ones that don't.'

I laughed at him.

'One of those guys,' he said flatly.

'Surely a borderline case, Michael?' said the plump man. 'So many of them are.'

If I'd been thinking straight I would have realized that 'borderline case' did not mean 'undecided' to them; it meant 'danger – immediate action!'

They took it. The plump man, who was also a fairly big man, flung his arms around me and the wiry one approached in the gloom. I yelled something when I felt a hypodermic stab my arm. Then I went numb and stupid.

My wife came running up the stairs. 'What's going on?' she demanded. I saw her heading for the curtain behind which we keep an aged hair-trigger Marlin ·38 rifle. There was nothing wrong with her guts, but they attacked her where courage doesn't count. I croaked her name a couple of times and heard the plump man say gently, with great concern: 'I'm afraid your husband needs ... help.' She turned from the curtain, her eyes wide. He had struck

subtly and knowingly; there is probably not one writer's wife who does not suspect her husband is a potential psychotic.

'Dear – ' she said to me as I stood there paralysed.

He went on: 'Michael and I dropped in because we both admire your husband's work; we were surprised and distressed to find his conversation so . . . disconnected. My dear, as you must know, I have some experience through my pastorate with psychotherapy. Have you ever – forgive my bluntness – had doubts about his sanity?'

'Dear, what's the matter?' she asked me anxiously. I just stood there, staring. God knows what they injected me with, but its effect was to cloud my mind, render all activity impossible, send my thoughts spinning after their tails. I was insane. (*This incident, seemingly the least plausible part of Corwin's story, actually stands up better than most of the narrative to one familiar with recent advances in biochemistry. Corwin could have been injected with lysergic acid, or with protein extracts from the blood of psychotics. It is a matter of cold laboratory fact that such injections produce temporary psychosis in the patient. Indeed, it is on such experimental psychoses that the new tranquillizer drugs are developed and tested. C.M.K.*)

To herself, she said aloud, dully: 'Well, it's finally come. Christmas when I burned the turkey and he wouldn't speak to me for a week. The way he drummed his fingers when I talked. All his little crackpot ways – how he has to stay at the Waldorf but I have to cut his hair and save a dollar. I hoped it was just the rotten weather and cabin fever. I hoped when spring came – ' She began to sob. The plump man comforted her like a father. I just stood there staring and waiting. And eventually Mickey glided up in the dark and gave her a needleful too and

(*Here occurs an aggravating and important hiatus. One can only guess that Corwin and his wife were loaded into the car, driven somewhere, separated, and separately, under false names, committed to different mental institutions. I have recently learned to my dismay that there are States which require only the barest sort of licensing to operate such institutions. One State Inspector of Hospitals even wrote to me in these words '. . . no doubt there are some places in our State which are not even licensed, but we have never made any effort*

to close them and I cannot recall any statute making such operation illegal. We are not a wealthy State like you up North and some care for these unfortunates is better than none, is our viewpoint here . . .' C.M.K.)

three months. Their injections last a week. There's always somebody to give me another. You know what mental hospital attendants are like: an easy bribe. But they'd be better advised to bribe a higher type, like a male nurse, because my attendant with the special needle for me is off on a drunk. My insanity wore off this morning and I've been writing in my room ever since. A quick trip up and down the corridor collected the cigarette papers and a tiny ballpoint pen from some breakfast-food premium gadget. I think my best bet is to slip these papers out in the batch of Chinese fortune cookies they're doing in the bakery. Occupational therapy, this is called. My own o.t. is shovelling coal when I'm under the needle. Well, enough of this. I shall write down The Answer, slip down to the bakery, deal out the cigarette papers into the waiting rounds of cookie dough, crimp them over and return to my room. Doubtless my attendant will be back by then and I'll get another shot from him. I shall not struggle; I can only wait. THE ANSWER: HUMAN BEINGS RAISED TO SPEAK AN INDO-EUROPEAN LANGUAGE SUCH AS ENGLISH HAVE THE FOLLOWING IN

(*That is the end of the last of the Corwin Papers I have been able to locate. It should be superfluous to urge all readers to examine carefully any fortune cookie slips they may encounter. The next one you break open may contain what my poor friend believed, or believes, to be a great message to mankind. He may be right. His tale is a wild one but it is consistent. And it embodies the only reasonable explanation I have ever seen for the presence of certain books on the best-seller list. C.M.K.*)

The Cage

BERTRAM CHANDLER

Imprisonment is always a humiliating experience, no matter how philosophical the prisoner. Imprisonment by one's own kind is bad enough – but one can, at least, talk to one's captors, one can make one's wants understood; one can, on occasion, appeal to them man to man.

Imprisonment is doubly humiliating when one's captors, in all honesty, treat one as a lower animal.

The party from the survey ship could, perhaps, be excused for failing to recognize the survivors from the interstellar liner *Lode Star* as rational beings. At least two hundred days had passed since their landing on the planet without a name – an unintentional landing made when *Lode Star*'s Ehrenhaft generators, driven far in excess of their normal capacity by a breakdown of the electronic regulator, had flung her far from the regular shipping lanes to an unexplored region of space. *Lode Star* had landed safely enough; but shortly thereafter (troubles never come singly) her pile had got out of control and her captain had ordered his first mate to evacuate the passengers and those crew members not needed to cope with the emergency, and to get them as far from the ship as possible.

Hawkins and his charges were well clear when there was a flare of released energy, a not very violent explosion. The survivors wanted to turn to watch, but Hawkins drove them on with curses and, at times, blows. Luckily they were up wind from the ship and so escaped the fall-out.

When the fireworks seemed to be over, Hawkins, accompanied by Dr Boyle, the ship's surgeon, returned to the scene of the dis-

aster. The two men, wary of radioactivity, were cautious and stayed a safe distance from the shallow, still smoking crater that marked where the ship had been. It was all too obvious to them that the captain, together with his officers and technicians, was now no more than an infinitesimal part of the incandescent cloud that had mushroomed up into the low overcast.

Thereafter the fifty-odd men and women, the survivors of *Lode Star*, had degenerated. It hadn't been a fast process – Hawkins and Boyle, aided by a committee of the more responsible passengers, had fought a stout rearguard action. But it had been a hopeless sort of fight. The climate was against them, for a start. Hot it was, always in the neighbourhood of 85° Fahrenheit. And it was wet – a thin, warm drizzle falling all the time. The air seemed to abound with the spores of fungi – luckily these did not attack living skin but throve on dead organic matter, on clothing. They throve to an only slightly lesser degree on metals and on the synthetic fabrics that many of the castaways wore.

Danger, outside danger, would have helped to maintain morale. But there were no dangerous animals. There were only little smooth-skinned things, not unlike frogs, that hopped through the sodden undergrowth, and, in the numerous rivers, fishlike creatures ranging in size from the shark to the tadpole, and all of them possessing the bellicosity of the latter.

Food had been no problem after the first few hungry hours. Volunteers had tried a large, succulent fungus growing on the boles of the huge fern-like trees. They had pronounced it good. After a lapse of five hours they had neither died nor even complained of abdominal pains. That fungus was to become the staple diet of the castaways. In the weeks that followed other fungi had been found, and berries, and roots – all of them edible. They provided a welcome variety.

Fire – in spite of the all-pervading heat – was the blessing most missed by the castaways. With it they could have supplemented their diet by catching and cooking the little frog-things of the rain forest, the fishes of the streams. Some of the hardier spirits did eat these animals raw, but they were frowned upon by most of the other members of the community. Too, fire would have helped to drive back the darkness of the long nights, would, by its real

warmth and light, have dispelled the illusion of cold produced by the ceaseless dripping of water from every leaf and frond.

When they fled from the ship, most of the survivors had possessed pocket lighters – but the lighters had been lost when the pockets, together with the clothing surrounding them, had disintegrated. In any case, all attempts to start a fire in the days when there were still pocket lighters had failed – there was not, Hawkins swore, a single dry spot on the whole accursed planet. Now the making of fire was quite impossible: even if there had been present an expert on the rubbing together of two dry sticks he could have found no material with which to work.

They made their permanent settlement on the crest of a low hill. (There were, so far as they could discover, no mountains.) It was less thickly wooded there than the surrounding plains, and the ground was less marshy underfoot. They succeeded in wrenching fronds from the fern-like trees and built for themselves crude shelters – more for the sake of privacy than for any comfort that they afforded. They clung, with a certain desperation, to the governmental forms of the worlds that they had left, and elected themselves a council. Boyle, the ship's surgeon, was their chief. Hawkins, rather to his surprise, was returned as a council member by a majority of only two votes – on thinking it over he realized that many of the passengers must still bear a grudge against the ship's executive staff for their present predicament.

The first council meeting was held in a hut – if so it could be called – especially constructed for the purpose. The council members squatted in a rough circle. Boyle, the president, got slowly to his feet. Hawkins grinned wryly as he compared the surgeon's nudity with the pomposity that he seemed to have assumed with his elected rank, as he compared the man's dignity with the unkempt appearance presented by his uncut, uncombed grey hair, his uncombed and straggling grey beard.

'Ladies and gentlemen,' began Boyle.

Hawkins looked around him at the naked, pallid bodies, at the stringy, lustreless hair, the long, dirty fingernails of the men and the unpainted lips of the women. He thought, I don't suppose I look much like an officer and a gentleman myself.

'Ladies and gentlemen,' said Boyle, 'we have been, as you know,

elected to represent the human community upon this planet. I suggest that at this, our first meeting, we discuss our chances of survival – not as individuals, but as a race – '

'I'd like to ask Mr Hawkins what our chances are of being picked up,' shouted one of the two women members, a dried-up, spinsterish creature with prominent ribs and vertebrae.

'Slim,' said Hawkins. 'As you know, no communication is possible with other ships or with planet stations when the Interstellar Drive is operating. When we snapped out of the Drive and came in for our landing we sent out a distress call – but we couldn't say where we were. Furthermore, we don't know that the call was received – '

'Miss Taylor,' said Boyle huffily, 'Mr Hawkins, I would remind you that I am the duly elected president of this council. There will be time for a general discussion later.

'As most of you may already have assumed, the age of this planet, biologically speaking, corresponds roughly with that of Earth during the Carboniferous Era. As we know, no species yet exists to challenge our supremacy. By the time such a species does emerge – something analogous to the giant lizards of Earth's Triassic Era – we should be well established – '

'*We* shall be dead!' called one of the men.

'We shall be dead,' agreed the doctor, 'but our descendants will be very much alive. We have to decide how to give them as good a start as possible. Language we shall bequeath to them – '

'Never mind the language, Doc,' called the other woman member. She was a small blonde, slim, with a hard face. 'It's just this question of descendants that I'm here to look after. I represent the women of childbearing age – there are, as you must know, fifteen of us here. So far the girls have been very, very careful. We have reason to be. Can you, as a medical man, guarantee – bearing in mind that you have no drugs, no instruments – safe deliveries? Can you guarantee that our children will have a good chance of survival?'

Boyle dropped his pomposity like a worn-out garment.

'I'll be frank,' he said. 'I have not, as you, Miss Hart, have pointed out, either drugs or instruments. But I can assure you, Miss Hart, that your chances of a safe delivery are far better than

they would have been on Earth during, say, the eighteenth century. And I'll tell you why. On this planet, so far as we know (and we have been here long enough now to find out the hard way), there exist no micro-organisms harmful to Man. Did such organisms exist, the bodies of those of us still surviving would be, by this time, mere masses of suppuration. Most of us, of course, would have died of septicaemia long ago. And that, I think, answers *both* your questions.'

'I haven't finished yet,' she said. 'Here's another point. There are fifty-three of us here, men and women. There are ten married couples – so we'll count them out. That leaves thirty-three people, of whom twenty are men. Twenty men to thirteen (aren't we girls always unlucky?) women. All of us aren't young – but we're all of us women. What sort of marriage set-up do we have? Monogamy? Polyandry?'

'Monogamy, of course,' said a tall, thin man sharply. He was the only one of those present who wore clothing – if it could be called that. The disintegrating fronds lashed around his waist with a strand of vine did little to serve any useful purpose.

'All right, then,' said the girl. 'Monogamy; I'd rather prefer it that way myself. But I warn you that if that's the way we play it there's going to be trouble. And in any murder involving passion and jealousy the woman is as liable to be a victim as either of the men – and I don't want *that*.'

'What do you propose, then, Miss Hart?' asked Boyle.

'Just this, Doc. When it comes to our mating we leave love out of it. If two men want to marry the same woman, then let them fight it out. The best man gets the girl – and keeps her.'

'Natural selection . . .' murmured the surgeon. 'I'm in favour – but we must put it to the vote.'

At the crest of the hill was a shallow depression, a natural arena. Round the rim sat the castaways – all but four of them. One of the four was Dr Boyle – he had discovered that his duties as president embraced those of a referee; it had been held that he was best competent to judge when one of the contestants was liable to suffer permanent damage. Another of the four was the girl Mary Hart. She had found a serrated twig with which to comb her long hair,

had contrived a wreath of yellow flowers with which to crown the victor. Was it, wondered Hawkins as he sat with the other council members, a hankering after an Earthly wedding ceremony, or was it a harking back to something older and darker?

'A pity that these blasted moulds got our watches,' said the fat man on Hawkins' right. 'If we had any means of telling the time we could have rounds, make a proper prize-fight of it.'

Hawkins nodded. He looked at the four in the centre of the arena – at the strutting, barbaric woman, at the pompous old man, at the two dark-bearded young men with their glistening white bodies. He knew them both – Fennet had been a Senior Cadet of the ill-fated *Lode Star*; Clemens, at least seven years Fennet's senior, was a passenger, had been a prospector on the frontier worlds.

'If we had anything to bet with,' said the fat man happily, 'I'd lay it on Clemens. That cadet of yours hasn't a snowball's chance in hell. He's been brought up to fight clean – Clemens has been brought up to fight dirty.'

'Fennet's in better condition,' said Hawkins. 'He's been taking exercise, while Clemens has just been lying around sleeping and eating. Look at the paunch on him!'

'There's nothing wrong with good healthy flesh and muscle,' said the fat man, patting his own paunch.

'No gouging, no biting!' called the doctor. 'And may the best man win!'

He stepped back smartly, away from the contestants, stood with the Hart woman.

There was an air of embarrassment about the pair of them as they stood there, each with his fists hanging at his sides. Each seemed to be regretting that matters had come to such a pass.

'Go *on*!' screamed Mary Hart at last. 'Don't you want me? You'll live to a ripe old age here – and it'll be lonely with no woman!'

'They can always wait around until your daughters grow up, Mary!' shouted one of her friends.

'If I ever have any daughters!' she called. 'I shan't at this rate!'

'Go on!' shouted the crowd. 'Go on!'

Fennet made a start. He stepped forward almost diffidently,

dabbed with his right fist at Clemens's unprotected face. It wasn't a hard blow, but it must have been painful. Clemens put his hand up to his nose, brought it away and stared at the bright blood staining it. He growled, lumbered forward with arms open to hug and crush. The cadet danced back, scoring twice more with his right.

'Why doesn't he *hit* him?' demanded the fat man.

'And break every bone in his fist? They aren't wearing gloves, you know,' said Hawkins.

Fennet decided to make a stand. He stood firm, his feet slightly apart, and brought his right into play once more. This time he left his opponent's face alone, went for his belly instead. Hawkins was surprised to see that the prospector was taking the blows with apparent equanimity – he must be, he decided, much tougher in actuality than in appearance.

The cadet sidestepped smartly . . . and slipped on the wet grass. Clemens fell heavily on to his opponent; Hawkins could hear the *whoosh* as the air was forced from the lad's lungs. The prospector's thick arms encircled Fennet's body – and Fennet's knee came up viciously to Clemens's groin. The prospector squealed, but hung on grimly. One of his hands was around Fennet's throat now, and the other one, its fingers viciously hooked, was clawing for the cadet's eyes.

'No gouging!' Boyle was screaming. 'No gouging!'

He dropped down to his knees, caught Clemens's wrist with both his hands.

Something made Hawkins look up. It may have been a sound, although this is doubtful; the spectators were behaving like boxing fans at a prizefight. They could hardly be blamed – this was the first piece of real excitement that had come their way since the loss of the ship. It may have been a sound that made Hawkins look up, it may have been the sixth sense possessed by all good spacemen. What he saw made him cry out.

Hovering above the arena was a helicopter. There was something about the design of it, a subtle oddness, that told Hawkins that this was no Earthly machine. From its smooth, shining belly dropped a net, seemingly of dull metal. It enveloped the struggling figures on the ground, trapped the doctor and Mary Hart.

Hawkins shouted again – a wordless cry. He jumped to his feet, ran to the assistance of his ensnared companions. The net seemed to be alive. It twisted itself around his wrists, bound his ankles. Others of the castaways rushed to aid Hawkins.

'Keep away!' he shouted. 'Scatter!'

The low drone of the helicopter's rotors rose in pitch. The machine lifted. In an incredibly short space of time the arena was to the First Mate's eyes no more than a pale green saucer in which little white ants scurried aimlessly. Then the flying machine was above and through the base of the low clouds, and there was nothing to be seen but drifting whiteness.

When, at last, it made its descent Hawkins was not surprised to see the silvery tower of a great spaceship standing among the low trees on a level plateau.

The world to which they were taken would have been a marked improvement on the world they had left, had it not been for the mistaken kindness of their captors. The cage in which the three men were housed duplicated, with remarkable fidelity, the climatic condition of the planet upon which *Lode Star* had been lost. It was glassed in, and from sprinklers in its roof fell a steady drizzle of warm water. A couple of dispirited tree ferns provided little shelter from the depressing precipitation. Twice a day a hatch at the back of the cage, which was made of a sort of concrete, opened, and slabs of fungus remarkably similar to that on which they had been subsisting were thrown in. There was a hole in the floor of the cage; this the prisoners rightly assumed was for sanitary purposes.

On either side of them were other cages. In one of them was Mary Hart – alone. She could gesture to them, wave to them, and that was all. The cage on the other side held a beast built on the same general lines as a lobster, but with a strong resemblance to a kind of squid. Across the broad roadway they could see other cages, but not what they housed.

Hawkins, Boyle, and Fennet sat on the damp floor and stared through the thick glass and the bars at the beings outside who stared at them.

'If only they were humanoid,' sighed the doctor. 'If only they

were the same shape as we are, we might make a start towards convincing them that we, too, are intelligent beings.'

'They aren't the same shape,' said Hawkins. 'And we, were the situations reversed, would take some convincing that three six-legged beer barrels were men and brothers . . . Try Pythagoras's Theorem again,' he said to the cadet.

Without enthusiasm the youth broke fronds from the nearest tree fern. He broke them into smaller pieces, then on the mossy floor laid them out in the design of a right-angled triangle with squares constructed on all three sides. The natives – a large one, one slightly smaller, and a little one – regarded him incuriously with their flat, dull eyes. The large one put the tip of a tentacle into a pocket – the things wore clothing – and pulled out a brightly coloured packet, handed it to the little one. The little one tore off the wrapping, started stuffing pieces of some bright blue confection into the slot on its upper side that, obviously, served it as a mouth.

'I wish they were allowed to feed the animals,' sighed Hawkins. 'I'm sick of that damned fungus.'

'Let's recapitulate,' said the doctor. 'After all, we've nothing else to do. We were taken from our camp by the helicopter – six of us. We were taken to the survey ship – a vessel that seemed in no way superior to our own interstellar ships. You assure us, Hawkins, that the ship used the Ehrenhaft Drive or something so near to it as to be its twin brother . . .'

'Correct,' agreed Hawkins.

'On the ship we're kept in separate cages. There's no ill treatment, we're fed and watered at frequent intervals. We land on this strange planet, but we see nothing of it. We're hustled out of cages like so many cattle into a covered van. We know that we're being driven *somewhere*, that's all. The van stops, the door opens and a couple of these animated beer barrels poke in poles with smaller editions of those fancy nets on the end of them. They catch Clemens and Miss Taylor, drag them out. We never see them again. The rest of us spend the night and the following day and night in individual cages. The next day we're taken to this . . . zoo . . .'

'Do you think they were vivisected?' asked Fennet. 'I never liked Clemens, but . . .'

'I'm afraid they were,' said Boyle. 'Our captors must have learned of the difference between the sexes by it. Unluckily there's no way of determining intelligence by vivisection – '

'The filthy brutes!' shouted the cadet.

'Easy, son,' counselled Hawkins. 'You can't blame them, you know. We've vivisected animals a lot more like us than we are to these things.'

'The problem,' the doctor went on, 'is to convince these things – as you call them, Hawkins – that we are rational beings like themselves. How would they define a rational being? How would *we* define a rational being?'

'Somebody who knows Pythagoras's Theorem,' said the cadet sulkily.

'I read somewhere,' said Hawkins, 'that the history of Man is the history of the fire-making, tool-using animal . . .'

'Then make fire,' suggested the doctor. 'Make us some tools, and use them.'

'Don't be silly. You know that there's not an artifact among the bunch of us. No false teeth even – not even a metal filling. Even so . . .' He paused. 'When I was a youngster there was, among the cadets in the interstellar ships, a revival of the old arts and crafts. We considered ourselves in a direct line of descent from the old windjammer sailormen, so we learned how to splice rope and wire, how to make sennit and fancy knots and all the rest of it. Then one of us hit on the idea of basketmaking. We were in a passenger ship, and we used to make our baskets secretly, daub them with violent colours and then sell them to passengers as genuine souvenirs from the Lost Planet of Arcturus VI. There was a most distressing scene when the Old Man and the Mate found out . . .'

'What are you driving at?' asked the doctor.

'Just this. We will demonstrate our manual dexterity by the weaving of baskets – I'll teach you how.'

'It might work . . .' said Boyle slowly. 'It might just work . . . On the other hand, don't forget that certain birds and animals do the same sort of thing. On Earth there's the beaver, who builds quite cunning dams. There's the bower bird, who makes a bower for his mate as part of the courtship ritual . . .'

The Head Keeper must have known of creatures whose courting habits resembled those of the Terran bower bird. After three days of feverish basketmaking, which consumed all the bedding and stripped the tree ferns, Mary Hart was taken from her cage and put in with the three men. After she had got over her hysterical pleasure at having somebody to talk to again she was rather indignant.

It was good, thought Hawkins drowsily, to have Mary with them. A few more days of solitary confinement must surely have driven the girl crazy. Even so, having Mary in the same cage had its drawbacks. He had to keep a watchful eye on young Fennet. He even had to keep a watchful eye on Boyle – the old goat!

Mary screamed.

Hawkins jerked into complete wakefulness. He could see the pale form of Mary – on this world it was never completely dark at night – and, on the other side of the cage, the forms of Fennet and Boyle. He got hastily to his feet, stumbled to the girl's side.

'What is it?' he asked.

'I . . . I don't know . . . Something small, with sharp claws . . . It ran over me . . .'

'Oh,' said Hawkins, 'that was only Joe.'

'*Joe?*' she demanded.

'I don't know exactly what he – or she – is,' said the man.

'I think he's definitely *he*,' said the doctor.

'What is Joe?' she asked again.

'He must be the local equivalent to a mouse,' said the doctor, 'although he looks nothing like one. He comes up through the floor somewhere to look for scraps of food. We're trying to tame him – '

'You encourage the brute?' she screamed. 'I demand that you do something about him – at once! Poison him, or trap him. Now!'

'Tomorrow,' said Hawkins.

'Now!' she screamed.

'Tomorrow,' said Hawkins firmly.

The capture of Joe proved to be easy. Two flat baskets, hinged

like the valves of an oyster shell, under the trap. There was bait inside – a large piece of the fungus. There was a cunningly arranged upright that would fall at the least tug at the bait. Hawkins, lying sleepless on his damp bed, heard the tiny click and thud that told him that the trap had been sprung. He heard Joe's indignant chitterings, heard the tiny claws scrabbling at the stout basket-work.

Mary Hart was asleep. He shook her.

'We've caught him,' he said.

'Then kill him,' she answered drowsily.

But Joe was not killed. The three men were rather attached to him. With the coming of daylight they transferred him to a cage that Hawkins had fashioned. Even the girl relented when she saw the harmless ball of multicoloured fur bouncing indignantly up and down in its prison. She insisted on feeding the little animal, exclaimed gleefully when the thin tentacles reached out and took the fragment of fungus from her fingers.

For three days they made much of their pet. On the fourth day beings whom they took to be keepers entered the cage with their nets, immobilized the occupants, and carried off Joe and Hawkins.

'I'm afraid it's hopeless,' Boyle said. 'He's gone the same way . . .'

'They'll have him stuffed and mounted in some museum,' said Fennet glumly.

'No,' said the girl. 'They couldn't!'

'They could,' said the doctor.

Abruptly the hatch at the back of the cage opened.

Before the three humans could retreat, a voice called, 'It's all right, come on out!'

Hawkins walked into the cage. He was shaved, and the beginnings of a healthy tan had darkened the pallor of his skin. He was wearing a pair of trunks fashioned from some bright red material.

'Come on out,' he said again. 'Our hosts have apologized very sincerely, and they have more suitable accommodation prepared for us. Then, as soon as they have a ship ready, we're to go to pick up the other survivors.'

'Not so fast,' said Boyle. 'Put us in the picture, will you? What made them realize that we were rational beings?'

Hawkins' face darkened.

'Only rational beings,' he said, 'put other beings in cages.'

Eastward Ho!

WILLIAM TENN

The New Jersey Turnpike had been hard on the horses. South of New Brunswick the potholes had been so deep, the scattered boulders so plentiful, that the two men had been forced to move at a slow trot, to avoid crippling their three precious animals. And, of course, this far south, farms were non-existent: they had been able to eat nothing but the dried provisions in the saddlebags, and last night they had slept in a roadside service station, suspending their hammocks between the tilted, rusty gas pumps.

But it was still the best, the most direct route, Jerry Franklin knew. The Turnpike was a government road: its rubble was cleared semi-annually. They had made excellent time and come through without even developing a limp in the pack horse. As they swung out on the last lap, past the riven tree stump with the words TRENTON EXIT carved on its side, Jerry relaxed a bit. His father, his father's colleagues, would be proud of him. And he was proud of himself.

But the next moment, he was alert again. He rowelled his horse, moved up alongside his companion, a young man of his own age.

'Protocol,' he reminded. 'I'm the leader here. You know better than to ride ahead of me this close to Trenton.'

He hated to pull rank. But facts were facts, and if a subordinate got above himself he was asking to be set down. After all, he was the son – and the oldest son, at that – of the Senator from Idaho; Sam Rutherford's father was a mere Undersecretary of State and Sam's mother's family was pure post office clerk all the way back.

Sam nodded apologetically and reined his horse back the

proper couple of feet. 'Thought I saw something odd,' he explained. 'Looked like an advance party on the side of the road – and I could have sworn they were wearing buffalo robes.'

'Seminole don't wear buffalo robes, Sammy. Don't you remember your sophomore political science?'

'I never had any political science, Mr Franklin: I was an engineering major. Digging around in ruins has always been my dish. But, from the little I know, I didn't *think* buffalo robes went with the Seminole. That's why I was – '

'Concentrate on the pack horse,' Jerry advised. 'Negotiations are my job.'

As he said this, he was unable to refrain from touching the pouch upon his breast with rippling fingertips. Inside it was his commission, carefully typed on one of the last precious sheets of official government stationery (and it was not one whit less official because the reverse side had been used years ago as a scribbled interoffice memo), and signed by the President himself. In ink!

The existence of such documents was important to a man in later life. He would have to hand it over, in all probability, during the conferences, but the commission to which it attested would be on file in the capitol up north. And, when his father died, and he took over one of the two hallowed Idaho seats, it would give him enough stature to make an attempt at membership on the Appropriations Committee. Or, for that matter, why not go the whole hog – the Rules Committee itself? No Senator Franklin had ever been a member of the Rules Committee . . .

The two envoys knew they were on the outskirts of Trenton when they passed the first gangs of Jerseyites working to clear the road. Frightened faces glanced at them briefly, and quickly bent again to work. The gangs were working without any visible supervision. Evidently the Seminole felt that simple instructions were sufficient.

But as they rode into the blocks of neat ruins that were the city proper and still came across nobody more important than white men, another explanation began to occur to Jerry Franklin. This all had the look of a town still at war, but where were the combatants? Almost certainly on the other side of Trenton, defending the Delaware River – that was the direction from which the new

rulers of Trenton might fear attack – not from the north where there was only the United States of America.

But if that were so, whom in the world could they be defending against? Across the Delaware to the south there was nothing but more Seminole. Was it possible – was it possible that the Seminole had at last fallen to fighting among themselves?

Or was it possible that Sam Rutherford had been right? Fantastic. Buffalo robes in Trenton! There should be no buffalo robes closer than a hundred miles westward, in Harrisburg.

But when they turned on to State Street, Jerry bit his lip in chagrin. Sam had seen correctly, which made him one up.

Scattered over the wide lawn of the gutted state capital were dozens of wigwams. And the tall, dark men who sat impassively, or strode proudly among the wigwams, all wore buffalo robes. There was no need even to associate the paint on their faces with a remembered lecture in political science: these were Sioux.

So the information that had come drifting up to the government about the identity of the invader was totally inaccurate – as usual. Well, you couldn't expect communication miracles over this long a distance. But that inaccuracy made things difficult. It might invalidate his commission for one thing: his commission was addressed directly to Osceola VII, Ruler of All the Seminoles. And if Sam Rutherford thought this gave him a right to preen himself –

He looked back dangerously. No, Sam would give no trouble. Sam knew better than to dare an I-told-you-so. At his leader's look, the son of the Undersecretary of State dropped his eyes groundwards to indicate humility.

Satisfied, Jerry searched his memory for relevant data on recent political relationships with the Sioux. He couldn't recall much – just the provisions of the last two or three treaties. It would have to do.

He drew up before an important-looking warrior and carefully dismounted. You might get away with talking to a Seminole while mounted, but not the Sioux. The Sioux were very tender on matters of protocol with white men.

'We come in peace,' he said to the warrior standing as impassively straight as the spear he held, as stiff and hard as the rifle on his back. 'We come with a message of importance and many gifts

to your chief. We come from New York, the home of our chief.' He thought a moment, then added 'You know, the Great White Father?'

Immediately, he was sorry for the addition. The warrior chuckled briefly: his eyes lit up with a lightning-stroke of mirth. Then his face was expressionless again, and serenely dignified as befitted a man who had counted coup many times.

'Yes,' he said. 'I have heard of him. Who has not heard of the wealth and power and far dominions of the Great White Father? Come, I will take you to our chief. Walk behind me, white man.'

Jerry motioned Sam Rutherford to wait.

At the entrance to a large, expensively decorated tent, the Indian stood aside and casually indicated that Jerry should enter.

It was dim inside, but the illumination was rich enough to take Jerry's breath away. Oil lamps! Three of them! These people lived well.

A century ago, before the whole world had gone smash in the last big war, his people had owned plenty of oil lamps themselves. Better than oil lamps, perhaps, if one could believe the stories the engineers told around the evening fires. Such stories were pleasant to hear, but they were glories of the distant past. Like the stories of overflowing granaries and chock-full supermarkets, they made you proud of the history of your people, but they did nothing for you now. They made your mouth water, but they didn't feed you.

The Indians, whose tribal organization had been the first to adjust to the new conditions, in the all-important present, the Indians had the granaries, the Indians had the oil lamps. And the Indians . . .

There were two nervous white men serving food to the group squatting on the floor. An old man, the chief, with a carved, chunky body. Three warriors, one of them surprisingly young for council. And a middle-aged Negro, wearing the same bound-on rags as Franklin, except that they looked a little newer, a little cleaner.

Jerry bowed low before the chief, spreading his arms apart, palms down.

'I come from New York, from our chief,' he mumbled. In spite of himself, he was more than a little frightened. He wished he

knew their names so that he could relate them to specific events. Although he knew what their names would be like – approximately. The Sioux, the Seminole, all the Indian tribes renascent in power and numbers, all bore names garlanded with anachronism. That queer mixture of several levels of the past, overlaid always with the cocky, expanding present. Like the rifles *and* the spears, one for the reality of fighting, the other for the symbol that was more important than reality. Like the use of wigwams on campaign, when, according to the rumours that drifted smokily across country, their slave artisans could now build the meanest Indian noble a damp-free, draughtproof dwelling such as the President of the United States, lying on his special straw pallet, did not dream about. Like paint-spattered faces peering through newly re-invented, crude microscopes. What had microscopes been like? Jerry tried to remember the Engineering Survey Course he'd taken in his freshman year – and drew a blank. All the same, the Indians were so queer, *and* so awesome. Sometimes you thought that destiny had meant them to be conquerors, with a conqueror's careless inconsistency. Sometimes . . .

He noticed that they were waiting for him to continue. 'From our chief,' he repeated hurriedly. 'I come with a message of importance and many gifts.'

'Eat with us,' the old man said. 'Then you will give us your gifts and your message.'

Gratefully, Jerry squatted on the ground a short distance from them. He was hungry, and among the fruit in the bowls he had seen something that must be an orange. He had heard so many arguments about what oranges tasted like!

After a while, the old man said, 'I am Chief Three Hydrogen Bombs. This' – pointing to the young man – 'is my son, Makes Much Radiation. And this' – pointing to the middle-aged Negro – 'is a sort of compatriot of yours.'

At Jerry's questioning look, and the chief's raised finger of permission, the Negro explained. 'Sylvester Thomas. Ambassador to the Sioux from the Confederate States of America.'

'The Confederacy? She's still alive? We heard ten years ago –'

'The Confederacy is very much alive, sir. The Western Confederacy that is, with its capital at Jackson, Mississippi. The

Eastern Confederacy, the one centred at Richmond, Virginia, did go down under the Seminole. We have been more fortunate. The Arapahoe, the Cheyenne, and' – with a nod to the chief – 'especially the Sioux, if I may say so, sir, have been very kind to us. They allow us to live in peace, so long as we till the soil quietly and pay our tithes.'

'Then would you know, Mr Thomas – ' Jerry began eagerly. 'That is . . . the Lone Star Republic – Texas – Is it possible that Texas, too . . .?'

Mr Thomas looked at the door of the wigwam unhappily. 'Alas, my good sir, the Republic of the Lone Star Flag fell before the Kiowa and the Comanche long years ago when I was still a small boy. I don't remember the exact date, but I do know it was before even the last of California was annexed by the Apache and the Navajo, and well before the nation of the Mormons under the august leadership of – '

Makes Much Radiation shifted his shoulders back and forth and flexed his arm muscles. 'All this talk,' he growled. 'Paleface talk. Makes me tired.'

'Mr Thomas is not a paleface,' his father told him sharply. 'Show respect! He's our guest and an accredited ambassador – you're not to use a word like paleface in his presence!'

One of the other, older warriors near the chief spoke up. 'In the old days, in the days of the heroes, a boy of Makes Much Radiation's age would not dare raise his voice in council before his father. Certainly not to say the things he just has. I cite as reference, for those interested, Robert Lowie's definitive volume, *The Crow Indians*, and Lesser's fine piece of anthropological insight, *Three Types of Siouan Kinship*. Now, whereas we have not yet been able to reconstruct a Siouan kinship pattern on the classic model described by Lesser, we have developed a working arrangement that – '

'The trouble with you, Bright Book Jacket,' the warrior on his left broke in, 'is that you're too much of a classicist. You're always trying to live in the Golden Age instead of the present, and a Golden Age that really has little to do with the Sioux. Oh, I'll admit that we're as much Dakotan as the Crow, from the linguist's point of view at any rate, and that, superficially, what applies to

the Crow should apply to us. But what happens when we quote Lowie in so many words and try to bring his precepts into daily life?'

'Enough,' the chief announced. 'Enough, Hangs A Tale. And you, too, Bright Book Jacket – enough, enough! These are private tribal matters. Though they do serve to remind us that the paleface was once great before he became sick and corrupt and frightened. These men whose holy books teach us the lost art of living like Sioux, men like Lesser, men like Robert H. Lowie, were not these men palefaces? And in memory of them should we not show tolerance?'

'A-ah!' said Makes Much Radiation impatiently. 'As far as I'm concerned, the only good palefaces are dead. And that's that.' He thought a bit. 'Except their women. Paleface women are fun when you're a long way from home and feel like raising a little hell.'

Chief Three Hydrogen Bombs glared his son into silence. Then he turned to Jerry Franklin. 'Your message and your gifts. First your message.'

'No, Chief,' Bright Book Jacket told him respectfully but definitely. 'First the gifts. *Then* the message. That's the way it was done.'

'I'll have to get them. Be right back.' Jerry walked out of the tent backwards and ran to where Sam Rutherford had tethered the horses. 'The presents,' he said urgently. 'The presents for the chief.'

The two of them tore at the pack straps. With his arms loaded, Jerry returned through the warriors who had assembled to watch their activity with quiet arrogance. He entered the tent, set the gifts on the ground and bowed low again.

'Bright beads for the chief,' he said, handing over two star sapphires and a large white diamond, the best that the engineers had excavated from the ruins of New York in the past ten years.

'Cloth for the chief,' he said, handing over a bolt of linen and a bolt of wool, spun and loomed in New Hampshire especially for this occasion and painfully, expensively carted to New York.

'Pretty toys for the chief,' he said, handing over a large, only slightly rusty alarm clock and a precious typewriter, both of them put in operating order by batteries of engineers and artisans

working in tandem (the engineers interpreting the brittle old documents to the artisans) for two and a half months.

'Weapons for the chief,' he said, handing over a beautifully decorated cavalry sabre, the prized hereditary possession of the Chief of Staff of the United States Air Force, who had protested its requisitioning most bitterly ('Damn it all, Mr President, do you expect me to fight these Indians with my bare hands?' 'No, I don't, Johnny, but I'm sure you can pick up one just as good from one of your eager junior officers').

Three Hydrogen Bombs examined the gifts, particularly the typewriter, with some interest. Then he solemnly distributed them among the members of his council, keeping only the typewriter and one of the sapphires for himself. The sword he gave to his son.

Makes Much Radiation tapped the steel with his fingernail. 'Not so much,' he stated. 'Not-*so-much*. Mr Thomas came up with better stuff than this from the Confederate States of America for my sister's puberty ceremony,' He tossed the sabre negligently to the ground. 'But what can you expect from a bunch of lazy, good-for-nothing white-skin stinkards?'

When he heard the last word, Jerry Franklin went rigid. That meant he'd have to fight Makes Much Radiation – and the prospect scared him right down to the wet hairs on his legs. The alternative was losing face completely among the Sioux.

'Stinkard' was a term from the Natchez system and was applied these days indiscriminately to all white men bound to field or factory under their aristocratic Indian overlords. A 'stinkard' was something lower than a serf, whose one value was that his toil gave his masters the leisure to engage in the activities of full manhood: hunting, fighting, thinking.

If you let someone call you a stinkard and didn't kill him, why, then you *were* a stinkard – and that was all there was to it.

'I am an accredited representative of the United States of America,' Jerry said slowly and distinctly, 'and the oldest son of the Senator from Idaho. When my father dies, I will sit in the Senate in his place. I am a free-born man, high in the councils of my nation, and anyone who calls me a stinkard is a rotten, no-good, foul-mouthed liar!'

There – it was done. He waited as Makes Much Radiation rose

to his feet. He noted with dismay the well-fed, well-muscled sleekness of the young warrior. He wouldn't have a chance against him. Not in hand-to-hand combat – which was the way it would be.

Makes Much Radiation picked up the sword and pointed it at Jerry Franklin. 'I could chop you in half right now like a fat onion,' he observed. 'Or I could go into a ring with you knife to knife and cut your belly open. I've fought and killed Seminole, I've fought Apache, I've even fought and killed Comanche. But I've never dirtied my hands with paleface blood, and I don't intend to start now. I leave such simple butchery to the overseers of our estates. Father, I'll be outside until the lodge is clean again.' Then he threw the sword ringingly at Jerry's feet and walked out.

Just before he left, he stopped, and remarked over his shoulder: 'The oldest son of the Senator from Idaho! Idaho has been part of the estates of my mother's family for the past forty-five years! When will these romantic children stop playing games and start living in the world as it is now?'

'My son,' the old chief murmured. 'Younger generation. A bit wild. Highly intolerant. But he means well. Really does. Means well.'

He signalled to the white serfs who brought over a large chest covered with great splashes of colour.

While the chief rummaged in the chest, Jerry Franklin relaxed inch by inch. It was almost too good to be true: he wouldn't have to fight Makes Much Radiation, and he hadn't lost face. All things considered, the whole business had turned out very well indeed.

And as for that last comment – well, why expect an Indian to understand about things like tradition and the glory that could reside forever in a symbol? When his father stood up under the cracked roof of Madison Square Garden and roared across to the Vice-President of the United States: 'The people of the sovereign state of Idaho will never and can never in all conscience consent to a tax on potatoes. From time immemorial, potatoes have been associated with Idaho, potatoes have been the pride of Idaho. The people of Boise say *no* to a tax on potatoes, the people of Pocatello say *no* to a tax on potatoes, the very rolling farmlands of the Gem of the Mountain say *no, never,* a thousand times *no,* to a tax on potatoes!' – when his father spoke like that, he *was* speaking for

the people of Boise and Pocatello. Not the crushed Boise or desolate Pocatello of today, true, but the magnificent cities as they had been of yore . . . and the rich farms on either side of the Snake River . . . And Sun Valley, Moscow, Idaho Falls, American Falls, Weiser, Grangeville, Twin Falls . . .

'We did not expect you, so we have not many gifts to offer in return,' Three Hydrogen Bombs was explaining. 'However, there is this one small thing. For you.'

Jerry gasped as he took it. It was a pistol, a real, brand-new pistol! And a small box of cartridges. Made in one of the Sioux slave workshops of the Middle West that he had heard about. But to hold it in his hand, and to know that it belonged to him!

It was a Crazy Horse forty-five, and, according to all reports, far superior to the Apache weapon that had so long dominated the West, the Geronimo thirty-two. This was a weapon a General of the Armies, a President of the United States, might never hope to own – and it was his!

'I don't know how – Really, I – I – '

'That's all right,' the chief told him genially. 'Really it is. My son would not approve of giving firearms to palefaces, but I feel that palefaces are like other people – it's the individual that counts. You look like a responsible man for a paleface: I'm sure you'll use the pistol wisely. Now your message.'

Jerry collected his faculties and opened the pouch that hung from his neck. Reverently, he extracted the precious document and presented it to the chief.

Three Hydrogen Bombs read it quickly and passed it to his warriors. The last one to get it, Bright Book Jacket, wadded it up into a ball and tossed it back at the white man.

'Bad penmanship,' he said. 'And "receive" is spelled three different ways. The rule is: "*i* before *e*, except after *c*." But what does it have to do with us? It's addressed to the Seminole chief, Osceola VII, requesting him to order his warriors back to the southern bank of the Delaware River, or to return the hostage given him by the Government of the United States as an earnest of good will and peaceful intentions. We're not Seminole: why show it to us?'

As Jerry Franklin smoothed out the wrinkles in the paper with

painful care and replaced the document in his pouch, the Confederate ambassador, Sylvester Thomas, spoke up. 'I think I might explain,' he suggested, glancing inquiringly from face to face. 'If you gentlemen don't mind . . . ? It is obvious that the United States Government has heard that an Indian tribe finally crossed the Delaware at this point, and assumed it was the Seminole. The last movement of the Seminole, you will recall, was to Philadelphia, forcing the evacuation of the capital once more and its transfer to New York City. It was a natural mistake: the communications of the American States, whether Confederate or United' – a small, coughing, diplomatic laugh here – 'have not been as good as might have been expected in recent years. It is quite evident that neither this young man nor the government he represents so ably and so well had any idea that the Sioux had decided to steal a march on his majesty, Osceola VII, and cross the Delaware at Lambertville.'

'That's right,' Jerry broke in eagerly. 'That's exactly right. And now, as the accredited emissary of the President of the United States, it is my duty formally to request that the Sioux nation honour the treaty of eleven years ago as well as the treaty of fifteen – I *think* it was fifteen – years ago, and retire once more behind the banks of the Susquehanna River. I must remind you that when we retired from Pittsburgh, Altoona, and Johnstown, you swore that the Sioux would take no more land from us and would protect us in the little we had left. I am certain that the Sioux want to be known as a nation that keeps its promises.'

Three Hydrogen Bombs glanced questioningly at the faces of Bright Book Jacket and Hangs A Tale. Then he leaned forward and placed his elbows on his crossed legs. 'You speak well, young man,' he commented. 'You are a credit to your chief . . . Now, then. Of course the Sioux want to be known as a nation that honours its treaties and keeps its promises. And so forth and so forth. But we have an expanding population. You don't have an expanding population. We need more land. You don't use most of the land you have. Should we sit by and see the land go to waste – worse yet, should we see it acquired by the Seminole who already rule a domain stretching from Philadelphia to Key West? Be reasonable. You can retire – to other places. You have most of New

England left and a large part of New York State. Surely you can afford to give up New Jersey.'

In spite of himself, in spite of his ambassadorial position, Jerry Franklin began yelling. All of a sudden it was too much. It was one thing to shrug your shoulders unhappily back home in the blunted ruins of New York, but here on the spot where the process was actually taking place – no, it was too much.

'What else can we afford to give up? Where else can we retire to? There's nothing left of the United States of America but a handful of square miles, and still we're supposed to move back! In the time of my forefathers, we were a great nation, we stretched from ocean to ocean, so say the legends of my people, and now we are huddled in a miserable corner of our land, starving, filthy, sick, dying, and ashamed. In the North, we are oppressed by the Ojibway and the Cree, we are pushed southwards relentlessly by the Montaignais; in the South, the Seminole climb up our land yard by yard; and in the West, the Sioux take a piece more of New Jersey, and the Cheyenne come up and nibble yet another slice out of Elmira and Buffalo. When will it stop – where are we to go?'

The old man shifted uncomfortably at the agony in his voice. 'It *is* hard; mind you, I don't deny that it *is* hard. But facts are facts, and weaker peoples always go to the wall. Now, as to the rest of your mission. If we don't retire as you request, you're supposed to ask for the return of your hostage. Sounds reasonable to me. You ought to get something out of it. However, I can't for the life of me remember a hostage. Do we have a hostage from you people?'

His head hanging, his body exhausted, Jerry muttered in misery, 'Yes. All the Indian nations on our borders have hostages. As earnests of our good will and peaceful intentions.'

Bright Book Jacket snapped his fingers. 'That girl. Sarah Cameron – Canton – what's-her-name.'

Jerry looked up. 'Calvin?' he asked. 'Could it be *Calvin*? Sarah Calvin? The daughter of the Chief Justice of the United States Supreme Court?'

'Sarah Calvin. That's the one. Been with us for five, six years. You remember, chief? The girl your son's been playing around with?'

Three Hydrogen Bombs looked amazed. 'Is *she* the hostage? I thought she was some paleface female he had imported from his plantations in southern Ohio. Well, well, well. Makes Much Radiation is just a chip off the old block, no doubt about it.' He became suddenly serious. 'But that girl will never go back. She rather goes for Indian loving. Goes for it all the way. And she has the idea that my son will eventually marry her. Or some such.'

He looked Jerry Franklin over. 'Tell you what, my boy. Why don't you wait outside while we talk this over? And take the sabre. Take it back with you. My son doesn't seem to want it.'

Jerry wearily picked up the sabre and trudged out of the wigwam.

Dully, uninterestedly, he noticed the band of Sioux warriors around Sam Rutherford and his horses. Then the group parted for a moment, and he saw Sam with a bottle in his hand. Tequila! The damned fool had let the Indians give him tequila – he was drunk as a pig.

Didn't he know that white men couldn't drink, didn't dare drink? With every inch of their unthreatened arable land under cultivation for foodstuffs, they were all still on the edge of starvation. There was absolutely no room in their economy for such luxuries as intoxicating beverages – and no white man in the usual course of a lifetime got close to so much as a glassful of the stuff. Give him a whole bottle of tequila and he was a stinking mess.

As Sam was now. He staggered back and forth in dipping semicircles, holding the bottle by its neck and waving it idiotically. The Sioux chuckled, dug each other in the ribs and pointed. Sam vomited loosely down the rags upon his chest and belly, tried to take one more drink, and fell over backwards. The bottle continued to pour over his face until it was empty. He was snoring loudly. The Sioux shook their heads, made grimaces of distaste, and walked away.

Jerry looked on and nursed the pain in his heart. Where could they go? What could they do? And what difference did it make? Might as well be as drunk as Sammy there. At least you wouldn't be able to feel.

He looked at the sabre in one hand, the bright new pistol in the other. Logically, he should throw them away. Wasn't it ridiculous

when you came right down to it, wasn't it pathetic – a white man carrying weapons?

Sylvester Thomas came out of the tent. 'Get your horses ready, my dear sir,' he whispered. 'Be prepared to ride as soon as I come back. Hurry!'

The young man slouched over to the horses and followed instructions – might as well do that as anything else. Ride where? Do what?

He lifted Sam Rutherford up and tied him upon his horse. Go back home? Back to the great, the powerful, the respected capital of what had once been the United States of America?

Thomas came back with a bound-and-gagged girl in his grasp. She wriggled madly. Her eyes crackled with anger and rebellion. She kept trying to kick the Confederate Ambassador.

She wore the rich robes of an Indian princess. Her hair was braided in the style currently fashionable among Sioux women. And her face had been stained carefully with some darkish dye.

Sarah Calvin. The daughter of the Chief Justice. They tied her to the pack horse.

'Chief Three Hydrogen Bombs,' the Negro explained. 'He feels his son plays around too much with paleface females. He wants this one out of the way. The boy has to settle down, prepare for the responsibilities of chieftainship. This may help. And listen, the old man likes you. He told me to tell you something.'

'I'm grateful. I'm grateful for every favour, no matter how small, how humiliating.'

Sylvester Thomas shook his head decisively. 'Don't be bitter, young sir. If you want to go on living you have to be alert. And you can't be alert and bitter at the same time . . . The Chief wants you to know there's no point in your going home. He couldn't say it openly in council, but the reason the Sioux moved in on Trenton has nothing to do with the Seminole on the other side. It has to do with the Ojibway-Cree-Montaignais situation in the north. They've decided to take over the eastern seaboard – that includes what's left of your country. By this time, they're probably in Yonkers or the Bronx, somewhere inside New York City. In a matter of hours, your government will no longer be in existence. The Chief had advanced word of this and felt it necessary for the Sioux to

establish some sort of bridgehead on the coast before matters were permanently stabilized. By occupying New Jersey he is preventing an Ojibway-Seminole junction. But he likes you, as I said, and wants you warned against going home.'

'Fine. But where *do* I go? Up a rain cloud? Down a well?'

'No,' Thomas admitted without smiling. He hoisted Jerry up on his horse. 'You might come back with me to the Confederacy – ' He paused, and when Jerry's sullen expression did not change, he went on, 'Well, then, may I suggest – and mind you, this is my advice, not the Chief's – head straight out to Asbury Park. It's not far away – you can make it in reasonable time if you ride hard. According to reports I've overheard, there should be units of the United States Navy there, the Tenth Fleet, to be exact.'

'Tell me,' Jerry asked, bending down. 'Have you heard any other news? Anything about the rest of the world? How has it been with those people – the Russkies, the Sovietskis, whatever they were called – the ones the United States had so much to do with years ago?'

'According to several of the chief's councillors, the Soviet Russians were having a good deal of difficulty with the people called Tatars. I *think* they were called Tatars. But, my good sir, you should be on your way.'

Jerry leaned down farther and grasped his hand. 'Thanks,' he said. 'You've gone to a lot of trouble for me. I'm grateful.'

'That's quite all right,' said Mr Thomas earnestly. 'After all, by the rocket's red glare, and all that. We were a single nation once.'

Jerry moved off, leading the other two horses. He set a fast pace, exercising the minimum of caution made necessary by the condition of the road. By the time they reached Route 33, Sam Rutherford, though not altogether sober or well, was able to sit in his saddle. They could then untie Sarah Calvin and ride with her between them.

She cursed and wept. 'Filthy paleface! Foul, ugly, stinking whiteskins! I'm an Indian, can't you see I'm an Indian? My skin isn't white – it's brown, brown!'

They kept riding.

Asbury Park was a dismal clutter of rags and confusion and

refugees. There were refugees from the north, from Perth Amboy, from as far as Newark. There were refugees from Princeton in the west, flying before the Sioux invasion. And from the south, from Atlantic City – even, unbelievably, from distant Camden – were still other refugees, with stories of a sudden Seminole attack, an attempt to flank the armies of Three Hydrogen Bombs.

The three horses were stared at enviously, even in their lathered, exhausted condition. They represented food to the hungry, the fastest transportation possible to the fearful. Jerry found the sabre very useful. And the pistol was even better – it had only to be exhibited. Few of these people had ever seen a pistol in action: they had a mighty, superstitious fear of firearms . . .

With this fact discovered, Jerry kept the pistol out nakedly in his right hand when he walked into the United States Naval Depot on the beach at Asbury Park. Sam Rutherford was at his side: Sarah Calvin walked sobbing behind.

He announced their family backgrounds to Admiral Milton Chester. The son of the Undersecretary of State. The daughter of the Chief Justice of the Supreme Court. The oldest son of the Senator from Idaho. 'And now. Do you recognize the authority of this document?'

Admiral Chester read the wrinkled commission slowly, spelling out the harder words to himself. He twisted his head respectfully when he had finished, looking first at the seal of the United States on the paper before him, and then at the glittering pistol in Jerry's hand.

'Yes,' he said at last. 'I recognize its authority. Is that a real pistol?'

Jerry nodded. 'A Crazy Horse forty-five. The latest. *How* do you recognize its authority?'

The admiral spread his hands. 'Everything is confused out here. The latest word I've received is that there are Ojibway warriors in Manhattan – that there is no longer any United States Government. And yet this' – he bent over the document once more – 'this is a commission by the President himself, appointing you full plenipotentiary. To the Seminole, of course. But full plenipotentiary. The last official appointment, to the best of my knowledge, of the President of the United States of America.'

He reached forward and touched the pistol in Jerry Franklin's hand curiously and inquiringly. He nodded to himself, as if he'd come to a decision. He stood up, and saluted with a flourish.

'I hereby recognize you as the last legal authority of the United States Government. And I place my fleet at your disposal.'

'Good.' Jerry stuck the pistol in his belt. He pointed with the sabre. 'Do you have enough food and water for a long voyage?'

'No, sir,' Admiral Chester said. 'But that can be arranged in a few hours at most. May I escort you aboard, sir?'

He gestured proudly down the beach and past the surf to where the three forty-five-foot gaff-rigged schooners rode at anchor. 'The United States Tenth Fleet, sir. Awaiting your orders.'

Hours later when the three vessels were standing out to sea, the admiral came to the cramped main cabin where Jerry Franklin was resting. Sam Rutherford and Sarah Calvin were asleep in the bunks above.

'And the orders, sir . . . ?'

Jerry Franklin walked out on the narrow deck, looked up at the taut, patched sails. 'Sail east.'

'East, sir? *Due* east?'

'Due east all the way. To the fabled lands of Europe. To a place where a white man can stand at last on his own two legs. Where he need not fear persecution. Where he need not fear slavery. Sail east, Admiral, until we discover a new and hopeful world – a world of freedom!'

The Windows of Heaven

JOHN BRUNNER

The same day were all the fountains of the great deep broken up, and the windows of heaven were opened. And the rain was upon the earth forty days and forty nights.

*

The circuit was fuzzy; there were all kinds of noises coming out of the speaker that should not have been there. Arkwright experienced a momentary surge of panic, and threw a quick glance over his shoulder at the viewport which happened to be turned towards the sun. There was a broad shallow bite out of the left-hand edge.

Then Costello's high, rather over-carefully accented tones sorted themselves out of the hubbub. 'Hello, Moon One! Arkwright, can you hear me?'

Arkwright breathed a gusty sigh. 'Yes – just!'

'What's the trouble?' the reply came back; the time-lag was almost at maximum now, for the ship was dropping towards the landing. 'Would you check your transmitter?'

'The fault's not in the equipment,' said Arkwright sourly. 'Have you taken a look at the sun lately?'

'I haven't left the blockhouse since you blasted off.' A splutter of interference muffled the last syllable. 'Why, what's happened to it?'

'There's the biggest sunspot I've ever seen coming around the disc,' Arkwright reported. 'Can you check with the observatory?'

'Well, yes, but I don't see there's much they could do about it.'

'They may be able to tell us how long this blasted interference is liable to go on for.'

'Possibly. Okay, I'll do that.' Costello was silent for a moment, as if he had covered the mike to speak to someone else. 'How far are you from the surface now?'

'About six hundred and twenty seconds,' Arkwright answered, glancing at the chronometer. 'Braking procedure should start at a hundred and fifty.'

'Fine. You're on schedule.' Even Costello's formal, clipped speech didn't hide the intense excitement he felt. 'We'll be watching and listening. Good luck!'

'Thanks,' said Arkwright, and pushed himself away from the handholds he had been gripping. The straps of the acceleration couch floated in mid-air; he caught the nearest and drew himself down on to the air-filled pad. Giving a final look round to make sure he hadn't left anything out which the deceleration would knock to the floor and break, he wrapped the straps around him and fastened the clips.

Well, for better or worse, this was it.

Behind him, in the heart of the atomic reactor, relays were answering the second-by-second click of the master chronometer; dampers were winding out on their screw rods, the radiation level was building up and dashing a deluge of gamma against the shielding of the pilot compartment.

Precisely and exactly at the hundred and fifty second mark, the pumps leapt into life and thundered a cataract of propellant into the centre of the cylindrical 'firebox'. The temperature there approximated 4,000° Centigrade.

At once the propellant, heated in a fraction of a second from the coldness of the ship's sunless side, expanded with explosive force, and a white-hot tongue of dissociated molecules sprang out towards the barren surface of the moon.

A slap of deceleration, like being brought up short on a breaking rope: Arkwright sank with a gusty sigh into the cushions. His eyes were fixed on the plumb-bob which indicated the ship's attitude as it poised perilously on its tenuous pillar of gas, his hands ready to slam home the emergency accelerator if by mischance the gyros precessed and the ship toppled.

The plumb-bob remained steady; yard by yard, and at last foot

by foot, the ship settled to the smooth floor of the *Mare*; the main hydraulic landing leg met solidity; the weight of the ship compressed a telescopic section at the top of the leg and closed a relay; four other extensible legs shot out and found a purchase, and the engine's roar died away into a sigh and then into silence.

A man was on the moon.

Stiffly – after nearly four days without gravity at all, even the lunar pull tried his muscles – Arkwright got up and walked uncertainly towards the viewport. The one he chose showed the stark black-and-whiteness of a ringwall, scattered mountains, hillocks and jagged rocks – and Earth, like a blue-green fruit against the unbearable blackness of the sky.

'I made it!' he shouted across the cabin, as if the microphone were a listening man. 'D'you hear me? *I made it!*'

A torrent of solar static laughed back at him from the speaker; when it cleared, Costello and many other people – it seemed that everyone on the project must be singing and shouting behind him in the blockhouse – were already calling their congratulations into the circuit.

Finally, when things had quietened down a little, Costello said, 'Okay! We'll go ahead and make the announcements now. Arkwright, how's it feel to be the most famous man in the world?'

'Ask me when I get back,' said Arkwright dryly. 'I'm not over the shock of finding myself here in one piece yet.'

A burst of static interrupted him, and the speaker spat and crackled loudly. Glancing up towards the sun, he saw that the stain on its edge was visibly creeping across the disc. It was as sharp as if a transit were beginning – but he knew there were no transits due.

There were almost too many things to be done for him to think about his achievement during the first twenty-four hours of his stay. Donning his spacesuit, he went out – first to try the sensation of moving under light gravity, then to attend to serious business. The greater part of his cargo consisted of scientific devices connected to a recorder and a telemetry unit; he had to set them up far enough from the ship to be unharmed by the blast-off later.

He aligned their antennae towards Earth and set them to working; Costello informed him that their signals were muddy, which was hardly surprising – his own voice could at times scarcely be made out through the intervening noise. With growing anxiety Arkwright looked towards the stained face of the sun.

'What's going on with old Sol?' he demanded.

'We don't know,' confessed Costello. 'Practically every observatory on Earth has been besieged by thousands of visitors wanting to see your ship for themselves – it's visible in a decent-sized instrument. I got on to Dutrey of the Astrophysical Foundation, though, to see if he could tell' – sputtering and crackling – 'going to go on. It's a damned nuisance it picked this time of all times to happen.'

'How is it' – crash! – 'how is it with you down there?'

'Bad! Ordinary radio is bearable, but television stations are having to suspend operations. All you get on the screen is interference – and I mean *all*.'

This time the noise was like a tidal wave. It seemed to flood out of the speaker and hit Arkwright with almost physical force. He waited for it to die down.

'There's no future in this,' he said wryly. 'I'll see if I can pick' – crackle – 'pick a time when the spot's not delivering so strongly. Have' – splutter – 'have someone listen out for me.'

'Of course. Don't worry about that.'

Interference was mounting to a steady pulse and surge in the background; Arkwright signed off and looked at the sun. It was like a suet pudding, he thought irrelevantly – stuffed with enormous black currants.

He couldn't explore very far from the ship in the time available; however, he had a Geiger counter to carry with him on the off-chance, and a fairly complete and exceedingly compact laboratory at one end of the cabin, so that he could run quick analyses on sample rocks which looked interesting. Any data gained at first hand on the composition of the moon was important, of course, but rocks containing water of crystallization, for example, might make the difference between a self-supporting lunar colony soon, or never.

The storm of solar radiation boiled slowly towards a climax. He had landed about a week before sunset, and he kept wishing

ridiculously that the lunar night would fall early, so that the setting of the sun would relieve the unceasing interference.

It was torture to listen to the faint, indistinct voices which reached him from Earth; many times he gave up in disgust, unable to unravel the tangled skeins of sound. He had looked to a constant contact with the people at base to alleviate tedium which might arise during his stay; there would be very little to do once he had explored his immediate neighbourhood. The instruments looked after themselves.

Still, he had samples of rock to break down in his test-tubes, and when he found the water he was looking for, he set up a small solar still to prove it could be extracted.

He went back continually to the radio, hoping to find at least a temporary lull in the racket. When he got his chance, he voiced his frustration to Costello, who tried to cheer him.

'After all, it won't last forever,' came the words indistinctly from the crackling speaker. 'We've reached the moon once, and it'll still be there for the next trip. It doesn't matter tremendously if all the data we get are what you can actually bring back with you. Inci' – crackle.

'Repeat please! Repeat!' Arkwright shouted, but the speaker spat at him like an angry cat, and after waiting five minutes he gave up.

He knew that the world must have been thrown into turmoil by the news of his landing; Costello had read him extracts from news reports and articles about him. It was all very fine and large to be hailed as a second Columbus, but Arkwright was finding that the spluttering of the radio got on his nerves. The rest of it could wait till his return.

He fetched out the biological kit which formed part of his equipment, and went to see if a certain strange stain he had noticed on the rocks could possibly be a living organism.

The urgent signal came about six hours before sunset; he was away from the ship, still working on the stain, and had just come to the conclusion that it was only a corrosive compound. He shut up the biokit and returned to the cabin.

The words could barely be distinguished through the hum

and thunder on the circuit. But he made out enough to tell that it was Costello calling him and that the man seemed in a hurry.

'What is it?' he demanded loudly and clearly.

'We can't get any readings from your spectrographs,' Costello shouted back.

'I'm not surprised!' said Arkwright. It was a scanning transmission of the television type.

'Can you read a spectrogram?'

'I don't know if I could without a line-chart, I'm afraid. Why do you want to know?'

'Would you go out anyway and see what you can do?'

'What's the hurry? When the sun sets in a few hours, interference should drop off enough for you to get the data.'

'That's exactly what we can't wait for. We need a free-space reading of the solar spectrum.'

Arkwright was silent for a moment. 'You must have heard from Dutrey, I take it. What's his opinion?'

'He wants that spectrogram to help him make up his mind. Make a note of what he wants you to look for, will you?'

Arkwright got a pencil and scratchpad, and took down the several dozen code numbers Costello read out; on many of them he had to ask for repetitions. At the end he whistled. 'Tell Dutrey not to be silly,' he requested. 'There just *aren't* that many hydrogen lines in sunlight!'

'In a free-space spectrogram there may be,' returned Costello after a pause. 'Apparently it'll mean something if there are.'

'Okay,' shrugged Arkwright. 'You're in charge. I'll have to be quick about this – the sun'll be down soon.'

He clamped his space-helmet back into position and went outside again.

The spectrographs were four in number; one was focused on the sun, the others on interesting stars whose spectra should furnish valuable data on stellar processes. Of course, thought Arkwright dryly, I would have put the solar one farthest from the ship, wouldn't I?

He dropped into the shadow of the instrument and thrust up the shaded visor before his face-plate to look at the blindingly bright

pattern on the visual object-glass. He gave a grunt of surprise as he began to see it clearly.

Dutrey was right; there *were* that many lines.

He set his notepad on his knee and checked the code numbers against the visible spectrum; as he found them he ticked them off, and then he added a few more which Costello hadn't given him. Something about these last tickled his memory, and he sat back, rapping his pencil against his helmet.

If he remembered rightly, they couldn't possibly have been there at all.

When he returned to the ship, he was frowning.

'Well?' said Costello with barely concealed eagerness. 'What did you find?'

'Everything you asked for, and more besides,' Arkwright told him, and thought he heard a gusty sigh through the static. 'I don't quite know what's happened, but something must have punched the sun right in the solar plexus.' He wondered if Costello found the joke amusing. 'Some of these lines belong down in the million-degree region. What in hell are they doing on the surface?'

'I don't know,' said Costello. 'But I hope Dutrey does.'

Anything else he might have added was lost in a welter of noise.

Arkwright returned worriedly to the spectrograph and took another careful look at it before the sun finally settled behind the mountains of the crater ringwall. It looked by now as if the legendary beast reputed to devour it at eclipses had been taking wholesale bites out of the limb.

As soon as it had disappeared completely, he re-aligned the solar spectrograph on to the next star on his list. It was a long job, involving the retiming of the precessing clockwork and the fitting of a larger lens with a longer focus. It was getting bitterly cold even inside his insulated suit by the time he finished, but he stuck with it, and it was two hours past sunset before he got back to the ship.

The solar interference should be masked by the moon to some extent by now, he figured. He raised Costello and was rewarded to find the noise slightly less nerve-racking.

'Well, what's Dutrey got to say?' he demanded.

'Have a heart, man! How long do you think he's had to digest

the information? Wald of Mount Palomar has been on to us too; I gave him the same data. Seems that the mess it's made of international communications has finally taken people's minds off you. There's the usual hooha demanding why the government doesn't *do* something – '

'I guess there would be,' said Arkwright. 'Well, let me know what they say, won't you? I'm bothered by that spectrum.'

He signed off to break out a meal for himself; he ate with his scratchpad open before him, staring at the symbols and trying to read some sort of meaning into them.

When he finished, he decided to go out and take a look at Earth.

The shining shape of the planet was dazzling because of the brightness lent by air and water; now that the sun had gone it stood out in true relation to the brilliance of the moon as seen from Earth. Arkwright had been intellectually aware of the difference, but seeing it was something altogether different again.

He gazed up at it for a long time.

And then, as suddenly as if a switch had been pulled, a light turned on, the illuminated part of the disc became blindly, incredibly bright.

The glare made him cry out and throw up his hand in front of his eyes; a purple after-image burned like fire on his retinae. It was only when he had blinked uncomprehendingly at it through the dark visor that he realized what might – what *must* have happened.

He turned and ran up the ladder to the airlock, cursing the slowness with which the mechanism cycled. As soon as the door opened, he tore across the cabin, shouting at the implacable black maw of the microphone.

'Costello! Anyone! Can you hear me? What happened?'

The voice which came back through a clamour of noise greater than any before was that of a stranger; it was hysterical, raging futilely into the void.

'The sun's blown up!'

The pitiless glare of the swollen sun played across the face of Earth like a flamethrower. Numbly, stirring neither to eat, drink, nor sleep, Arkwright sat and watched it.

For a little while – during the first few hours, while there were still places on the surface of the planet unscarred by the finger of flame – he managed to patch together a few facts from men who, in the midst of destruction, had remained calm enough to tell what was happening – not caring who was listening, not even certain that there was anyone to hear them.

They told of fantastic hurricanes devastating continents as the atmosphere at the noon meridian was flash-heated to boil it into wind; of the surface of the sea steaming and breaking into slow, sullen bubbles as if the bed of the ocean were one gigantic saucepan; of tidal waves roaring up the beach to roll twenty, fifty, a hundred miles inland. They told of acres of summer-dried plain and forest blazing in a moment into flame; of cities crumbling, of people seared to death more certainly than by atomic blast.

After the first complete revolution the icecaps had gone; the sea-level had risen enormously. The cold eternal waters of the Great Deeps must have been approaching boiling point by then; there would be no snowcaps left on mountains, no water running in the shallower rivers . . .

Later, the air was too full of steamy clouds for him to see more than a featureless disc, as blank and barren as the face of Venus.

Looking towards the horizon in the first hour, he had seen the last of the lunar peaks to catch the sunlight glow into sombre red; a few of them had crumbled. Seismic shocks still indicated that on the side no man had yet seen Earth's satellite too was being seared by the flaming heat.

He had expected that the tide of outflung gas from the sun would lick out and absorb the Earth–Moon system – but if that was going to happen, it would have happened in the first few hours. As nova explosions went, this was a small one; the expanded frontier of the sun would have engulfed Mercury, perhaps even Venus, but no farther.

And yet its work was as final as it needed to be. The thermocouple he had with him was a poor instrument for use over a quarter million miles; still, he made the attempt, and the dial told him silently that the equatorial temperature of Earth had risen by six hundred degrees.

At last he fell asleep at his post; head slumped back, limbs limp, he dived gladly into the unawareness of sheer exhaustion.

After that, time passed for him in a sort of daze. He would look up at the gleaming, featureless ball of clouds and not really remember what it signified; listen to the roar of static without any stir of hope that there might be a voice calling somewhere.

He wondered why he himself was taking the trouble to stay alive, and remembered that when the sun rose again on the moon, he would be denied the chance.

The long lunar night passed away. When the chronometer told him it was almost over, he donned his spacesuit again, his hands moving over the fastenings as if they belonged to someone else, and left the spaceship to watch for the final dawn. It seemed logical to him to do it that way, instead of cowering in the useless protection of the ship, or hiding in a cave among the rocks.

Standing on the plain of the *Mare*, he turned his eyes achingly towards Earth again. It was so brilliant in its new disguise of clouds that it seemed like a new giant star in the heavens, and not a world.

He thought of things he had done, places he had been, people he had called his friends – whom he would never see again. He wished he were a poet, perhaps, to write an epitaph, create a masterpiece for some unknown alien being to find and decipher in a million years, and learn how a race had died . . .

Well, or badly? He wondered.

And that was the end of Hitler and Napoleon, of Attila and Genghis Khan – so much the better. But it was also the end of Jesus, Buddha and Confucius; of Galileo, Newton, and Einstein; of Beethoven, Kreisler, and Armstrong; of Pheidias, Michaelangelo, and Picasso; of Homer and Shakespeare –

How could you simply pick up a pen and write THE END across a story that had lasted about two million years?

He had stood for so long in a trance, remembering, that it was some time before a single fact penetrated his regret-drugged mind, and he looked about him with a start.

The landscape lay in sunlight; long dawn shadows slanted towards the horizon. But he was still alive.

Unbelieving, he turned and looked full at the low, rising sun.

It was misshapen; it was diffuse, clothed in its own erupted gases, and it seemed larger than before. But it was no longer bright enough to kill him.

After so long a resignation to the inevitability of death, it took him a while to grow accustomed to the idea of staying alive. When he did so, he spent a while in frenzied, joyful shouting, until exhaustion sobered him and the thought what use he might make of his reprieve.

It could only be a reprieve. His release from the bond of Earth was temporary; he could not live out his life up here without food, water, oxygen . . .

Perhaps there were people who had lived through the hell of the nova in underground refuges: in deep mines, in H-bomb shelters. *Perhaps.*

There was only one way to find out. He would have to go back.

The face of Earth was changed beyond recognition. The heaving, oily seas; the blasted and scarred grasslands; the ruined cities poking up from newly inundated bays – it was a vision of Inferno, masked by thick, coiling clouds of steam and great black drifts of slowly dispersing smoke.

Flying the spaceship on its glider wings, he looked anxiously down whenever the fierce buffetings of the tortured air allowed, seeking a sign of life.

But what kind of life could have survived the storm of heat and radiation which had poured down from the sun?

He chose a landing ground on what had been a swamp; the ground had been parched to smooth dry mud, interrupted only by the remnants of a few scattered trees scorched into charcoal. Fantastic electrical storms raged on the horizon; he did not dare fly on farther and face them.

It was good, as landings go; he rolled a thousand yards, expecting every moment that his wheels would find a fissure and drop him crashing to the ground, but he halted safely.

As soon as he could leave the control panel, he got out his chemical kit and went to make some tests. They dealt the final blow to his hope that men might have survived.

There was no oxygen in the air; foetid water vapour and carbon

dioxide in incredible abundance from the gigantic burning that had taken place made up the balance with the nitrogen and hydrogen. Without oxygen, there could be no animal life; without animal life, vegetation was doomed.

He put on his spacesuit and plodded to the edge of the sea which glistened leadenly a mile away. It had been fifty miles distant before the icecaps melted – if he had recognized his present location correctly; the coastlines were so changed it was difficult to tell.

The sea rolled steaming against the beach; it was full of carrion. Fragments of fish were cast up by one wave and taken back by the next. He tried its temperature; it was within ten degrees of boiling, even now.

Without any real hope, he exposed some culture plates, thinking at least that airborne spores might be revealed by them. Sitting and waiting for them to show results, he looked out towards the steam-masked skyline.

'And the waters prevailed upon the Earth,' he murmured. It must have been like this in the Beginning – the air full of carbon dioxide from the dying volcanoes and steam from the cooling oceans. And both continents and oceans alike barren of life.

'This has all happened before,' he told the world. 'And every living substance which was upon the face of the ground was destroyed – '

Where did that come from, anyway? He thought a moment, and remembered. Of course: from the description of Noah's flood.

Had that flood really happened? He wondered. He knew that the story was widespread – almost too widespread to be a legend. The Jews had called him Noah; the Greeks, Deucalion; the Babylonians, whose version was the most ancient of all, had known him as Ut-Napishtim. Yes, that had been a great flood – but this was a more final one. Noah had carried with him his family and representatives of every species of bird and beast and insect. He was ready to start over.

Whereas he himself – and he looked at the culture plates to find them barren – was alone.

Later, before his laboratory bench, he faced the facts. The sea was sterile; the air was unbreathable; the land was bare. He was

not only the last human being; he was the last living creature on Earth.

He picked up one of the culture slides again listlessly, and gave an incredulous cry. A tiny colony of bacteria stained its surface.

Which medium had he exposed that one to? Feverishly he consulted his notes, and drew back in disappointment. It had been blank when he brought it into the ship.

It had been blank when he brought it into the ship.

But he was not the only living creature on Earth.

And out there things were as they had been in the Beginning, when life appeared on Earth: the sea sterile, the air unbreathable, the land bare – but *waiting*.

Smiling, certain now of what he must do, Arkwright got to his feet and opened the airlock.

*

And Noah went forth, and his sons, and his wife, and his sons' wives with him.

Every beast, every creeping thing, and every fowl, and whatsoever creepeth upon the Earth, after their kinds, went forth out of the Ark.

Common Time

JAMES BLISH

. . . the days went slowly round and round, endless and uneventful as cycles in space. Time, and time-pieces! How many centuries did my hammock tell, as pendulum-like it swung to the ship's dull roll, and ticked the hours and ages.

HERMAN MELVILLE, in *Mardi*

I

Don't move.

It was the first thought that came into Garrard's mind when he awoke, and perhaps it saved his life. He lay where he was, strapped against the padding, listening to the round hum of the engines. That in itself was wrong; he should be unable to hear the overdrive at all.

He thought to himself: *Has it begun already?*

Otherwise everything seemed normal. The DFC-3 had crossed over into interstellar velocity, and he was still alive, and the ship was still functioning. The ship should at this moment be travelling at 22·4 times the speed of light – a neat 4,157,000 miles per second.

Somehow Garrard did not doubt that it was. On both previous tries, the ships had whiffed away towards Alpha Centauri at the proper moment when the overdrive should have cut in; and the split-second of residual image after they had vanished, subjected to spectroscopy, showed a Doppler shift which tallied with the acceleration predicted for that moment by Haertel.

The trouble was not that Brown and Cellini hadn't gotten away

in good order. It was simply that neither of them had ever been heard from again.

Very slowly, he opened his eyes. His eyelids felt terrifically heavy. As far as he could judge from the pressure of the couch against his skin, the gravity was normal; nevertheless, moving his eyelids seemed almost an impossible job.

After long concentration, he got them fully open. The instrument-chassis was directly before him, extended over his diaphragm on its elbow-joint. Still without moving anything but his eyes – and those only with the utmost patience – he checked each of the meters. Velocity: 22·4 c. Operating-temperature: normal. Ship-temperature: 37° C. Air-pressure: 778 mm. Fuel: No. 1 tank full, No. 2 tank full, No. 3 tank full, No. 4 tank nine-tenths full. Gravity: 1 g. Calendar: stopped.

He looked at it closely, though his eyes seemed to focus very slowly, too. It was, of course, something more than a calendar – it was an all-purpose clock designed to show him the passage of seconds, as well as of the ten months his trip was supposed to take to the double star. But there was no doubt about it: the second-hand was motionless.

That was the second abnormality. Garrard felt an impulse to get up and see if he could start the clock again. Perhaps the trouble had been temporary and safely in the past. Immediately there sounded in his head the injunction he had drilled into himself for a full month before the trip had begun –

Don't move!

Don't move until you know the situation as far as it can be known without moving. Whatever it was that had snatched Brown and Cellini irretrievably beyond human ken was potent, and totally beyond anticipation. They had both been excellent men, intelligent, resourceful, trained to the point of diminishing returns and not a micron beyond that point – the best men in the Project. Preparations for every knowable kind of trouble had been built into their ships, as they had been built into the DFC-3. Therefore, if there was something wrong, nevertheless, it would be something that might strike from some commonplace quarter – and strike only once.

He listened to the humming. It was even and placid, and not very

loud, but it disturbed him deeply. The overdrive was supposed to be inaudible, and the tapes from the first unmanned test-vehicles had recorded no such hum. The noise did not appear to interfere with the overdrive's operation, or to indicate any failure in it. It was just an irrelevancy for which he could find no reason.

But the reason existed. Garrard did not intend to do so much as draw another breath until he found out what it was.

Incredibly, he realized for the first time that he had not in fact drawn one single breath since he had first come to. Though he felt not the slightest discomfort, the discovery called up so overwhelming a flash of panic that he very nearly sat bolt upright on the couch. Luckily – or so it seemed, after the panic had begun to ebb – the curious lethargy which had affected his eyelids appeared to involve his whole body, for the impulse was gone before he could summon the energy to answer it. And the panic, poignant though it had been for an instant, turned out to be wholly intellectual. In a moment, he was observing that his failure to breathe in no way discommoded him as far as he could tell – it was just there, waiting to be explained –

Or to kill him. But it hadn't, yet.

Engines humming; eyelids heavy; breathing absent; calendar stopped. The four facts added up to nothing. The temptation to move something – even if it were only a big toe – was strong, but Garrard fought it back. He had been awake only a short while – half an hour at most – and already had noticed four abnormalities. There were bound to be more, anomalies more subtle than these four; but available to close examination before he had to move. Nor was there anything in particular that he had to do, aside from caring for his own wants; the Project, on the chance that Brown's and Cellini's failure to return had resulted from some tampering with the overdrive, had made everything in the DFC-3 subject only to the computer. In a very real sense, Garrard was just along for the ride. Only when the overdrive was off could he adjust –

Pock.

It was a soft, low-pitched noise, rather like a cork coming out of a wine bottle. It seemed to have come just from the right of the control-chassis. He halted a sudden jerk of his head on the cushions

towards it with a flat fiat of will. Slowly, he moved his eyes in that direction.

He could see nothing that might have caused the sound. The ship's temperature-dial showed no change, which ruled out a heat-noise from differential contraction or expansion – the only possible explanation he could bring to mind.

He closed his eyes – a process which turned out to be just as difficult as opening them had been – and tried to visualize what the calendar had looked like when he had first come out of anaesthesia. After he got a clear and – he was almost sure – accurate picture, Garrard opened his eyes again.

The sound had been the calendar, advancing one second. It was now motionless again, apparently stopped.

He did not know how long it took the second hand to make that jump, normally; the question had never come up. Certainly the jump, when it came at the end of each second, had been too fast for the eye to follow.

Belatedly, he realized what all this cogitation was costing him in terms of essential information. The calendar had moved. Above all and before anything else, he *must* know exactly how long it took it to move again –

He began to count, allowing an arbitrary five seconds lost. *One-and-a-six, one-and-a-seven, one-and-an-eight* –

Garrard had gotten only that far when he found himself plunged into Hell.

First, and utterly without reason, a sickening fear flooded swiftly through his veins, becoming more and more intense. His bowels began to knot, with infinite slowness. His whole body became a field of small, slow pulses – not so much shaking him as putting his limbs into contrary joggling motions, and making his skin ripple gently under his clothing. Against the hum another sound became audible, a nearly subsonic thunder which seemed to be inside his head. Still the fear mounted, and with it came the pain, and the tenesmus – a board-like stiffening of his muscles, particularly across his abdomen and his shoulders, but affecting his forearms almost as grievously. He felt himself beginning, very gradually, to double at the middle, a motion about which he could do precisely nothing – a terrifying kind of dynamic paralysis . . .

It lasted for hours. At the height of it, Garrard's mind, even his very personality, was washed out utterly; he was only a vessel of horror. When some few trickles of reason began to return over that burning desert of reasonless emotion, he found that he was sitting up on the cushions, and that with one arm he had thrust the control-chassis back on its elbow so that it no longer jutted over his body. His clothing was wet with perspiration, which stubbornly refused to evaporate or to cool him. And his lungs ached a little, although he could still detect no breathing.

What under God had happened? Was it this that had killed Brown and Cellini? For it would kill Garrard, too – of that he was sure, if it happened often. It would kill him even if it happened only twice more, if the next two such things followed the first one closely. At the very best it would make a slobbering idiot of him; and though the computer might bring Garrard and the ship back to Earth, it would not be able to tell the Project about this tornado of senseless fear.

The calendar said that the eternity in hell had taken three seconds. As he looked at it in academic indignation, it said *Pock* and condescended to make the total seizure four seconds long. With grim determination, Garrard began to count again.

He took care to establish the counting as an absolutely even, automatic process which would not stop at the back of his mind no matter what other problem he tacked along with it, or what emotional typhoons should interrupt him. Really compulsive counting cannot be stopped by anything – not the transports of love nor the agonies of empires. Garrard knew the dangers in deliberately setting up such a mechanism in his mind, but he also knew how desperately he needed to time that clock-tick. He was beginning to understand what had happened to him – but he needed exact measurement before he could put that understanding to use.

Of course there had been plenty of speculation on the possible effect of the overdrive on the subjective time of the pilot, but none of it had come to much. At any speed below the velocity of light, subjective and objective time were exactly the same as far as the pilot was concerned. For an observer on Earth, time aboard the ship would appear to be vastly slowed at near-light speeds; but for the pilot himself there would be no apparent change.

Since flight beyond the speed of light was impossible – although for slightly differing reasons – by both the current theories of relativity, neither theory had offered any clue as to what would happen on board a translight ship. They would not allow that any such ship could even exist. The Haertel transformation, on which, in effect, the DFC-3 flew, was non-relativistic: it showed that the apparent elapsed time of a translight journey should be identical in ship-time, and in the time of observers at both ends of the trip.

But since ship and pilot were part of the same system, both covered by the same expression in Haertel's equation, it had never occurred to anyone that the pilot and the ship might keep different times. The notion was ridiculous.

One-and-a-sevenhundredone, one-and-a-sevenhundredtwo, one-and-a-sevenhundredthree, one-and-a-sevenhundredfour . . .

The ship was keeping ship-time, which was identical with observer-time. It would arrive at the Alpha Centauri system in ten months. But the pilot was keeping Garrard-time, and it was beginning to look as though he wasn't going to arrive at all.

It was impossible, but there it was. Something – almost certainly an unsuspected physiological side-effect of the overdrive field on human metabolism, an effect which naturally could not have been detected in the preliminary, robot-piloted tests of the overdrive – had speeded up Garrard's subjective apprehension of time, and had done a thorough job of it.

The second-hand began a slow, preliminary quivering as the calendar's innards began to apply power to it. *Seventy-hundred-forty-one, seventy-hundred-forty-two, seventy-hundred-forty-three . . .*

At the count of 7,058 the second-hand began the jump to the next graduation. It took it several apparent minutes to get across the tiny distance, and several more to come completely to rest. Later still, the sound came to him:

Pock.

In a fever of thought, but without any real physical agitation, his mind began to manipulate the figures. Since it took him longer to count an individual number as the number became larger, the interval between the two calendar-ticks probably was closer to

7,200 seconds than to 7,058. Figuring backward brought him quickly to the equivalence he wanted.

One second in ship-time was two hours in Garrard-time.

Had he really been counting for what was, for him, two whole hours? There seemed to be no doubt about it. It looked like a long trip ahead.

Just how long it was going to be struck him with stunning force. Time had been slowed for him by a factor of 7,200. He would get to Alpha Centauri in just 720,000 months.

Which was –

Six thousand years!

II

Garrard sat motionless for a long time after that, the Nessus-shirt of warm sweat swathing him persistently, refusing even to cool. There was, after all, no hurry.

Six thousand years. There would be food and water and air for all that time, or for sixty or six hundred thousand years; the ship would synthesize his needs, as a matter of course, for as long as the fuel lasted, and the fuel bred itself. Even if Garrard ate a meal every three seconds of objective, or ship, time (which, he realized suddenly, he wouldn't be able to do, for it took the ship several seconds of objective-time to prepare and serve up a meal once it was ordered; he'd be lucky if he ate once a day, Garrard-time), there would be no reason to fear any shortage of supplies. That had been one of the earliest of the possibilities for disaster that the Project engineers had ruled out in the design of the DFC-3.

But nobody had thought of providing a mechanism which would indefinitely refurbish Garrard. After six thousand years, there would be nothing left of him but a faint film of dust on the DFC-3's dully-gleaming horizontal surfaces. His corpse might outlast him a while, since the ship itself was sterile – but eventually, he would be consumed by the bacterium which he carried in his own digestive tract. He needed that bacterium to synthesize part of his B-vitamin needs while he lived, but it would consume him without compunction once he had ceased to be as complicated and delicately balanced a thing as a pilot – or as any other kind of life.

Garrard was, in short, to die before the DFC-3 had gotten fairly away from Sol; and when, after 12,000 apparent-years, the DFC-3 returned to Earth, not even his mummy would be still aboard.

The chill that went through him at that seemed almost unrelated to the way he thought he felt about the discovery; it lasted an enormously long time, and in so far as he could characterize it at all, it seemed to be a chill of urgency and excitement – not at all the kind of chill he should be feeling at a virtual death-sentence. Luckily it was not as intolerably violent as the last emotional convulsion; and when it was over, two clock-ticks later, it left behind a residuum of doubt.

Suppose that this effect of time-stretching was only mental? The rest of his bodily processes might still be keeping ship-time; Garrard had no immediate reason to believe otherwise. If so, he would be able to move about only on ship-time, too; it would take many apparent months to complete the simplest task.

But he would live, if that were the case. His mind would arrive at Alpha Centauri six thousand years older, and perhaps madder, than his body, but he would live.

If, on the other hand, his bodily movements were going to be as fast as his mental processes, he would have to be enormously careful. He would have to move slowly and exert as little force as possible. The normal human hand movement, in such a task as lifting a pencil, took the pencil from a state of rest to another state of rest by imparting to it an acceleration of about two feet per second – and, of course, decelerated it by the same amount. If Garrard were to attempt to impart to a two-pound weight, which was keeping ship-time, an acceleration of 14,440 ft/sec^2 in his time, he'd have to exert a force of 900 pounds on it.

The point was not that it couldn't be done – but that it would take as much effort as pushing a stalled jeep. He'd never be able to lift that pencil with his forearm muscles alone; he'd have to put his back into the task.

And the human body wasn't engineered to maintain stresses of that magnitude indefinitely. Not even the most powerful professional weightlifter is forced to show his prowess throughout every minute of every day.

Pock.

That was the calendar again; another second had gone by. Or another two hours. It had certainly seemed longer than a second, but less than two hours, too. Evidently subjective-time was an intensively recomplicated measure. Even in this world of micro-time – in which Garrard's mind, at least, seemed to be operating – he could make the lapses between calendar-ticks seem a little shorter by becoming actively interested in some problem or other. That would help, during the waking hours, but it would help only if the rest of his body were *not* keeping the same time as his mind. If it were not, then he would lead an incredibly active, but perhaps not intolerable mental life during the many centuries of his awake-time, and would be mercifully asleep for nearly as long.

Both problems – that of how much force he could exert with his body, and how long he could hope to be asleep in his mind – emerged simultaneously into the forefront of his consciousness while he still sat inertly on the hammock, their terms still much muddled together. After the single tick of the calendar, the ship – or the part of it that Garrard could see from here – settled back into complete rigidity. The sound of the engines, too, did not seem to vary in frequency or amplitude, at least as far as his ears could tell. He was still not breathing. Nothing moved, nothing changed.

It was the fact that he could still detect no motion of his diaphragm or his rib-cage that decided him at last. His body had to be keeping ship-time, otherwise he would have blacked out from oxygen-starvation long before now. That assumption explained, too, those two incredibly prolonged, seemingly sourceless saturnalias of emotion through which he had suffered: they had been nothing more nor less than the response of his endocrine glands to the purely intellectual reactions he had experienced earlier. He had discovered that he was not breathing, had felt a flash of panic and had tried to sit up. Long after his mind had forgotten those two impulses, they had inched their way from his brain down his nerves to the glands and muscles involved, and actual, *physical* panic had supervened. When that was over, he actually *was* sitting up, though the flood of adrenalin had prevented his noticing the motion as he had made it. The later chill – less violent, and apparently associated with the discovery that he might die long before the trip was

completed – actually had been his body's response to a much earlier mental command: the abstract fever of interest he had felt while computing the time-differential had been responsible for it.

Obviously, he was going to have to be very careful with apparently cold and intellectual impulses of any kind – or he would pay for them later with a prolonged and agonizing glandular reaction. Nevertheless, the discovery gave him considerable satisfaction, and Garrard allowed it free play; it certainly could not hurt him to feel pleased for a few hours, and the glandular pleasure might even prove helpful if it caught him at a moment of mental depression. Six thousand years, after all, provided a considerable number of opportunities for feeling down in the mouth; so it would be best to encourage all pleasure-moments, and let the after-reaction last as long as it might. It would be the instants of panic, of fear, of gloom which he would have to regulate sternly the moment they came into his mind; it would be those which would otherwise plunge him into four, five, six, perhaps even ten Garrard-hours of emotional inferno.

Pock.

There now, that was very good; there had been two Garrard-hours which he had passed with virtually no difficulty of any kind, and without being especially conscious of their passage. If he could really settle down and become used to this kind of scheduling, the trip might not be as bad as he had at first feared. Sleep would take immense bites out of it; and during the waking periods he could put in one hell of a lot of creative thinking. During a single day of ship-time, Garrard could get in more thinking than any philosopher of Earth could have managed during an entire lifetime. Garrard could, if he disciplined himself sufficiently, devote his mind for a century to running down the consequences of a single thought, down to the last detail, and still have millennia left to go on to the next thought. What panoplies of pure reason could he not have assembled by the time 6,000 years had gone by? With sufficient concentration, he might come up with the solution to the Problem of Evil between breakfast and dinner of a single ship's day, and in a ship's month might put his finger on the First Cause!

Pock.

Not that Garrard was sanguine enough to expect that he would remain logical or even sane throughout the trip. The vista was still grim, in much of its detail. But the opportunities, too, were there. He felt a momentary regret that it hadn't been Haertel, rather than himself, who had been given such an opportunity –

Pock.

– for the old man could certainly have made better use of it than Garrard could. The situation demanded someone trained in the highest rigours of mathematics to be put to the best conceivable use. Still and all Garrard began to feel –

Pock.

– that he would give a good account of himself, and it tickled him to realize that (as long as he held on to his essential sanity) he would return –

Pock.

– to Earth after ten Earth months with knowledge centuries advanced beyond anything –

Pock.

– that Haertel knew, or that anyone could know –

Pock.

– who had to work within a normal lifetime. *Pck.* The whole prospect tickled him. *Pck.* Even the clock-tick seemed more cheerful. *Pck.* He felt fairly safe now *Pck* in disregarding his drilled-in command *Pck* against moving *Pck*, since in any *Pck* event he *Pck* had already *Pck* moved *Pck* without *Pck* being *Pck* harmed *Pck* Pck Pck Pck Pck *pckpckpckpckpckpck*. . . .

He yawned, stretched, and got up. It wouldn't do to be too pleased, after all. There were certainly many problems that still needed coping with, such as how to keep the impulse towards getting a ship-time task performed going, while his higher centres were following the ramifications of some purely philosophical point. And besides . . .

And besides, he had just moved.

More than that; he had just performed a complicated manoeuvre with his body *in normal time*!

Before Garrard looked at the calendar itself, the message it had been ticking away at him had penetrated. While he had been enjoying the protracted, glandular backwash of his earlier feeling

of satisfaction, he had failed to notice, at least consciously, that the calendar was accelerating.

Good-bye, vast ethical systems which would dwarf the Greeks. Good-bye, calculi aeons advanced beyond the spinor-calculus of Dirac. Good-bye, cosmologies by Garrard which would allot the Almighty a job as third-assistant-waterboy in an n-dimensional backfield.

Good-bye, also, to a project he had once tried to undertake in college – to describe and count the positions of love, of which, according to under-the-counter myth, there were supposed to be at least forty-eight. Garrard had never been able to carry his tally beyond twenty, and he had just lost what was probably his last opportunity to try again.

The micro-time in which he had been living had worn off, only a few objective-minutes after the ship had gone into overdrive and he had come out of the anaesthetic. The long intellectual agony, with its glandular counterpoint, had come to nothing. Garrard was now keeping ship-time.

Garrard sat back down on the hammock, uncertain whether to be bitter or relieved. Neither emotion satisfied him in the end; he simply felt unsatisfied. Micro-time had been bad enough while it lasted; but now it was gone, and everything seemed normal. How could so transient a thing have killed Brown and Cellini? They were stable men, more stable, by his own private estimation, than Garrard himself. Yet he had come through it. Was there more to it than this?

And if there was – what, conceivably, could it be?

There was no answer. At his elbow, on the control-chassis which he had thrust aside during that first moment of infinitely-protracted panic, the calendar continued to tick. The engine-noise was gone. His breath came and went in natural rhythm. He felt light and strong. The ship was quiet, calm, unchanging.

The calendar ticked, faster and faster. It reached and passed the first hour, ship-time, of flight in overdrive.

Pock.

Garrard looked up in surprise. The familiar noise, this time, had been the hour-hand jumping one unit. The minute-hand was

already sweeping past the past half-hour. The second-hand was whirling like a propeller – and while he watched it, it speeded up to complete invisibility –

Pock.

Another hour. The half-hour already passed. *Pock.* Another hour. *Pock.* Another. *Pock. Pock. Pock. Pock. Pock. Pock. pck-pck-pck-pck-pckpckpckpck. . . .*

The hands of the calendar swirled towards invisibility as time ran away with Garrard. Yet the ship did not change. It stayed there, rigid, inviolate, invulnerable. When the date-tumblers reached a speed at which Garrard could no longer read them, he discovered that once more he could not move – and that, although his whole body seemed to be aflutter like that of a humming-bird, nothing coherent was coming to him through his senses. The room was dimming, becoming redder; or no, it was . . .

But he never saw the end of the process, never was allowed to look from the pinnacle of macro-time towards which the Haertel overdrive was taking him.

The pseudo-death took him first.

III

That Garrard did not die completely, and within a comparatively short time after the DFC-3 had gone into overdrive, was due to the purest of accidents; but Garrard did not know that. In fact, he knew nothing at all for an indefinite period, sitting rigid and staring, his metabolism slowed down to next to nothing, his mind almost utterly inactive. From time to time, a single wave of low-level metabolic activity passed through him – what an electrician might have termed a 'maintenance turnover' – in response to the urgings of some occult survival-urge; but these were of so basic a nature as to reach his consciousness not at all. This was the pseudo-death.

When the observer actually arrived, however, Garrard woke. He could make very little sense out of what he saw or felt even now; but one fact was clear: the overdrive was off – and with it the crazy alterations in time-rates – and there was strong light coming through one of the ports. The first leg of the trip was over. It had been

these two changes in his environment which had restored him to life.

The thing (or things) which had restored him to consciousness, however, was – it was what? It made no sense. It was a construction, a rather fragile one, which completely surrounded his hammock. No, it wasn't a construction, but evidently something alive – a living being, organized horizontally, that had arranged itself in a circle about him. No, it was a number of beings. Or a combination of all of these things.

How it had gotten into the ship was a mystery, but there it was. Or there they were.

'How do you hear?' the creature said abruptly. Its voice, or their voices, came at equal volume from every point in the circle, but not from any particular point in it. Garrard could think of no reason why that should be unusual.

'I –' he said. 'Or we – we hear with our ears. Here.'

His answer, with its unintentionally-long chain of open vowel-sounds, rang ridiculously. He wondered why he was speaking such an odd language.

'We-they wooed to pitch you-yours thiswise,' the creature said. With a thump, a book from the DFC-3's ample library fell to the desk beside the hammock. 'We wooed there and there and there for a many. You are the being-Garrard. We-they are the clinesterton beademung, with all of love.'

'With all of love,' Garrard echoed. The beademung's use of the language they both were speaking was odd; but again Garrard could find no logical reason why the beademung's usage should be considered wrong.

'Are-are you-they from Alpha Centauri?' he said hesitantly.

'Yes, we hear the twin radioceles, that show there beyond the gift-orifices. We-they pitched that the being-Garrard wooed with most adoration these twins and had mind to them, soft and loud alike. How do you hear?'

This time the being-Garrard understood the question. 'I hear Earth,' he said. 'But that is very soft, and does not show.'

'Yes,' said the beademung. 'It is a harmony, not a first, as ours. The All-Devouring listens to lovers there, not on the radioceles. Let me-mine pitch you-yours so to have mind of the rodalent

beademung and other brothers and lovers, along the channel which is fragrant to the being-Garrard.'

Garrard found that he understood the speech without difficulty. The thought occurred to him that to understand a language on its own terms – without having to put it back into English in one's own mind – is an ability that is won only with difficulty and long practice. Yet instantly, his mind said, 'But it *is* English,' which of course it was. The offer the clinesterton beademung had just made was enormously hearted, and he in turn was much minded and of love, to his own delighting as well as to the beademungen; that almost went without saying.

There were many matings of ships after that, and the being-Garrard pitched the harmonies of the beademungen, leaving his ship with the many gift-orifices in harmonic for the All-Devouring to love, while the beademungen made show of they-theirs.

He tried, also, to tell how he was out of love with the overdrive, which wooed only spaces and times, and made featurelings. The rodalent beademung wooed the overdrive, but it did not pitch he-them.

Then the being-Garrard knew that all the time was devoured, and he must hear Earth again.

'I pitch you-them to fullest love,' he told the beademungen, 'I shall adore the radioceles of Alpha and Proxima Centauri, "on Earth as it is in Heaven". Now the overdrive my-other must woo and win me, and make me adore a featureling much like silence.'

'But you will be pitched again,' the clinesterton beademung said. 'After you have adored Earth. You are much loved by Time, the All-Devouring. We-they shall wait for this othering.'

Privately Garrard did not faith as much, but he said, 'Yes, we-they will make a new wooing of the beademungen at some other radiant. With all of love.'

On this the beademungen made and pitched adorations, and in the midst the overdrive cut in. The ship with the many gift orifices and the being-Garrard him-other saw the twin radioceles sundered away.

Then, once more, came the pseudo-death.

IV

When the small candle lit in the endless cavern of Garrard's pseudo-dead mind, the DFC-3 was well inside the orbit of Uranus. Since the sun was still very small and distant, it made no spectacular display through the nearby port, and nothing called him from the post-death sleep for nearly two days.

The computers waited patiently for him. They were no longer immune to his control; he could now tool the ship back to Earth himself if he so desired. But the computers were also designed to take into account the fact that he might be truly dead by the time the DFC-3 got back. After giving him a solid week, during which time he did nothing but sleep, they took over again. Radio signals began to go out, tuned to a special channel.

An hour later, a very weak signal came back. It was only a directional signal, and it made no sound inside the DFC-3 – but it was sufficient to put the big ship in motion again.

It was that which woke Garrard. His conscious mind was still glazed over with the icy spume of the pseudo-death; and as far as he could see the interior of the cabin had not changed one whit, except for the book on the deck –

The book. The clinesterton beademung had dropped it there. But what under God was a clinesterton beademung? And what was he, Garrard, crying about? It didn't make sense. He remembered dimly some kind of experience out there by the Centauri twins –

– *the twin radioceles* –

There was another one of those words. It seemed to have Greek roots, but he knew no Greek – and besides, why would Centaurians speak Greek?

He leaned forward and actuated the switch which would roll the shutter off the front port, actually a telescope with a translucent viewing-screen. It showed a few stars, and a faint nimbus off on one edge which might be the Sun. At about one o'clock on the screen was a planet the size of a pea, which had tiny projections, like teacup handles, on each side. The DFC-3 hadn't passed Saturn on its way out; at that time it had been on the other side of

the sun from the route the starship had had to follow. But the planet was certainly difficult to mistake.

Garrard was on his way home – and he was still alive and sane. Or was he still sane? These fantasies about Centaurians – which still seemed to have such a profound emotional effect upon him – did not argue very well for the stability of his mind.

But they were fading rapidly. When he discovered, clutching at the handiest fragments of the 'memories', that the plural of *beademung* was *beademungen*, he stopped taking the problem seriously. Obviously a race of Centaurians who spoke Greek wouldn't also be forming weak German plurals. The whole business had obviously been thrown up by his unconscious.

But what *had* he found by the Centaurus stars?

There was no answer to that question but that incomprehensible garble about love, the All-Devouring, and beademungen. Possibly, he had never seen the Centaurus stars at all, but had been lying here, cold as a mackerel, for the entire twenty months.

Or had it been 12,000 years? After the tricks the overdrive had played with time, there was no way to tell what the objective date actually was. Frantically Garrard put the telescope into action. Where was the Earth? After 12,000 years –

The Earth was there. Which, he realized swiftly, proved nothing. The Earth had lasted for many millions of years; 12,000 years was nothing to a planet. The Moon was there, too; both were plainly visible, on the far side of the Sun – but not too far to pick them out clearly, with the telescope at highest power. Garrard could even see a clear sun-highlight on the Atlantic Ocean, not far east of Greenland; evidently the computers were bringing the DFC-3 in on the Earth from about 23 degrees north of the plane of the ecliptic.

The Moon, too, had not changed. He could even see on its face the huge splash of white, mimicking the sun-highlight on Earth's ocean, which was the magnesium-hydroxide landing-beacon, which had been dusted over the Mare Vaporum in the earliest days of space flight, with a dark spot on its southern edge which could only be the crater Monilius.

But that again proved nothing. The Moon never changed. A film of dust laid down by modern man on its face would last for

millennia – what, after all, existed on the Moon to blow it away? The Mare Vaporum beacon covered more than 4,000 square miles; age would not dim it, nor could man himself undo it – either accidentally, or on purpose – in anything under a century. When you dust an area that large on a world without atmosphere, it stays dusted.

He checked the stars against his charts. They hadn't moved; why should they have, in only 12,000 years? The pointer-stars in the Dipper still pointed to Polaris. Draco, like a fantastic bit of tape, wound between the two Bears, and Cepheus and Cassiopeia, as it always had done. These constellations told him only that it was spring in the northern hemisphere of Earth.

But spring of what year?

Then, suddenly, it occurred to Garrard that he had a method of finding the answer. The Moon causes tides in the Earth, and action and reaction are always equal and opposite. The Moon cannot move things on Earth without itself being affected – and that effect shows up in the moon's angular momentum. The Moon's distance from the Earth increases steadily by 0·6 inches every year. At the end of 12,000 years, it should be 600 feet farther away from the Earth than it had been when Garrard left it.

Was it possible to measure? Garrard doubted it, but he got out his ephemeris and his dividers anyhow, and took pictures. While he worked, the Earth grew nearer. By the time he had finished his first calculation – which was indecisive, because it allowed a margin for error greater than the distances he was trying to check – Earth and Moon were close enough in the telescope to permit much more accurate measurements.

Which were, he realized wryly, quite unnecessary. The computer had brought the DFC-3 back, not to an observed sun or planet, but simply to a calculated point. That Earth and Moon would not be near that point when the DFC-3 returned was not an assumption that the computer could make. That the Earth was visible from here was already good and sufficient proof that no more time had elapsed than had been calculated for from the beginning.

This was hardly new to Garrard; it had simply been retired to the back of his mind. Actually he had been doing all this figuring

for one reason, and one reason only: because deep in his brain, set to work by himself, there was a mechanism that demanded counting. Long ago, while he was still trying to time the ship's calendar, he had initiated compulsive counting – and it appeared that he had been counting ever since, That had been one of the known dangers of deliberately starting such a mental mechanism; and now it was bearing fruit in these perfectly useless astronomical exercises.

The insight was healing. He finished the figures roughly, and that unheard moron deep inside his brain stopped counting at last. It had been pawing its abacus for twenty months now, and Garrard imagined that it was as glad to be retired as he was to feel it go.

His radio squawked, and said anxiously, 'DFC-3, DFC-3. Garrard, do you hear me? Are you still alive? Everybody's going wild down here. Garrard, if you hear me, call us!'

It was Haertel's voice. Garrard closed the dividers so convulsively that one of the points nipped into the heel of his hand. 'Haertel, I'm here. DFC-3 to the Project. This is Garrard.' And then, without knowing quite why, he added: 'With all of love.'

Haertel, after all the hoopla was over, was more than interested in the time-effects. 'It certainly enlarges the manifold in which I was working,' he said. 'But I think we can account for it in the transformation. Perhaps even factor it out, which would eliminate it as far as the pilot is concerned. We'll see, anyhow.'

Garrard swirled his highball reflectively. In Haertel's cramped old office, in the Project's administration-shack, he felt both strange and as old, as compressed, constricted. He said, 'I don't think I'd do that, Adolph. I think it saved my life.'

'How?'

'I told you that I seemed to die after a while. Since I got home, I've been reading; and I've discovered that the psychologists take far less stock in the individuality of the human psyche than you and I do. You and I are physical scientists, so we think about the world as being all outside our skins – something which is to be observed, but which doesn't alter the essential *I*. But evidently, that old solipsistic position isn't quite true. Our very personalities, really, depend in large part upon *all* the things in our environment, large

and small, that exist outside our skins. If by some means you could cut a human being off from every sense-impression that comes to him from outside, he would cease to exist as a personality within two or three minutes. Probably he would die.'

'Unquote: Harry Stack Sullivan,' Haertel said dryly. 'So?'

'So,' Garrard said, 'think of what a monotonous environment the inside of a spaceship is. In ordinary interplanetary flight, in such an environment, even the most hardened spaceman may go off his rocker now and then. You know the typical spaceman's psychosis as well as I do, I suppose. The man's personality goes rigid, just like his surroundings. Usually he recovers as soon as he makes port, and makes contact with a more or less normal world again.

'But in the DFC-3, I was cut off from the world around me much more severely. I couldn't look outside the ports – I was in overdrive, and there was nothing to see. I couldn't communicate with home, because I was going faster than light. And then I found I couldn't move, too, for an enormous long while; and that even the instruments that are in constant change for the usual spaceman wouldn't be in motion for me. Even those were fixed.

'After the time-rate began to pick up, I found myself in an even more impossible box. The instruments moved, all right, but then they moved too *fast* for me to read them. The whole situation was now utterly rigid – and, in effect, I died. I froze as solid as the ship around me, and stayed that way as long as the overdrive was on.'

'By that showing,' Haertel said dryly, 'the time-effects were hardly your friends.'

'But they were, Adolph. Look. Your engines act on subjective-time; they keep it varying along continuous curves – from far-too-slow to far-too-fast – and, I suppose, back down again. Now, this is a *situation of continuous change*. It wasn't marked enough, in the long run, to keep me out of pseudo-death; but it was sufficient to protect me from being obliterated altogether, which I think is what happened to Brown and Cellini. Those men knew that they could shut down the overdrive if they could just get to it, and they killed themselves trying. But I knew that I just had to sit and take it – and, by my great good luck, your sine-curve time-variation made it possible for me to survive.'

'Ah, ha,' Haertel said. 'A point worth considering – though I doubt that it will make interstellar travel very popular!'

He dropped back into silence, his thin mouth pursed. Garrard took a grateful pull at his drink. At last Haertel said: 'Why are you in trouble over these Centaurians? It seems to me that you have done a good job. It was nothing that you were a hero – any fool can be brave – but I see also that you *thought*, where Brown and Cellini evidently only reacted. Is there some secret about what you found when you reached those two stars?'

Garrard said, 'Yes, there is. But I've already told you what it is. When I came out of the pseudo-death, I was just a sort of plastic palimpsest upon which anybody could have made a mark. My own environment, my ordinary Earth environment, was a hell of a long way off. My present surroundings were nearly as rigid as they had ever been. When I met the Centaurians – if I did, and I'm not at all sure of that – *they* became the most important thing in my world, and my personality changed to accommodate and understand them. That was a change about which I couldn't do a thing.

'Possibly I did understand them. But the man who understood them wasn't the same man you're talking to now, Adolph. Now that I'm back on Earth, I don't understand that man. He even spoke English in a way that's gibberish to me: If I can't understand myself during that period – and I can't; I don't even believe that that man was the Garrard I know – what hope have I of telling you or the Project about the Centaurians? They found me in a controlled environment, and they altered me by entering it. Now that they're gone, nothing comes through; I don't even understand why I think they spoke English!'

'Did they have a name for themselves?'

'Sure,' Garrard said. 'They were the beademungen.'

'What did they look like?'

'I never saw them.'

Haertel leaned forward. 'Then – '

'I heard them. I think.' Garrard shrugged, and tasted his Scotch again. He was home, and on the whole he was pleased.

But in his malleable mind he heard someone say, '*On Earth, as it is in Heaven,*' and then, in another voice, which might also have

been his own (why had he thought 'him-other'?), '*It is later than you think.*'

'Adolph,' he said, 'is this all there is to it? Or are we going to go on with it from here? How long will it take to make a better starship, a DFC-4?'

'Many years,' Haertel said, smiling kindly. 'Don't be anxious, Garrard. You've come back, which is more than the others managed to do, and nobody will ask you to go out again. I really think that it's hardly likely that we'll get another ship built during your lifetime; and even if we do, we'll be slow to launch it. We really have very little information about what kind of a playground you found out there.'

'I'll go,' Garrard said. 'I'm not afraid to go back – I'd like to go. Now that I know how the DFC-3 behaves, I could take it out again, bring you back proper maps, tapes, photos.'

'Do you really think,' Haertel said, his face suddenly serious, 'that we could let the DFC-3 go out again? Garrard, we're going to take that ship apart practically molecule by molecule; that's preliminary to the building of any DFC-4. And no more can we let you go. I don't mean to be cruel, but has it occurred to you that this desire to go back may be the result of some kind of post-hypnotic suggestion? If so, the more badly you want to go back, the more dangerous to us all you may be. We are going to have to examine you just as thoroughly as we do the ship. If these beademungen wanted you to come back, they must have had a reason – and we have to know that reason.'

Garrard nodded, but he knew that Haertel could see the slight movement of his eyebrows and the wrinkles forming in his forehead, the contractions of the small muscles which stop the flow of tears only to make grief patent on the rest of the face.

'In short,' he said, '*don't move.*'

Haertel looked politely puzzled. Garrard, however, could say nothing more. He had returned to humanity's common time, and would never leave it again.

Not even, for all his dimly-remembered promise, with all there was left in him of love.

Fulfilment

A. E. VAN VOGT

I sit on a hill. I have sat here, it seems to me, for all eternity. Occasionally I realize there must be a reason for my existence. Each time, when this thought comes, I examine the various probabilities, trying to determine what possible motivation I can have for being on the hill. Alone on the hill. Forever on a hill overlooking a long, deep valley.

The first reason for my presence seems obvious: I can think. Give me a problem. The square root of a very large number? The cube root of a larger one? Ask me to multiply an eighteen-digit prime by itself a quadrillion times. Pose me a problem in variable curves. Ask me where an object will be at a given moment at some future date, and let me have one brief opportunity to analyse the problem.

The solution will take me but an instant of time.

But no one ever asks me such things. I sit alone on a hill. Sometimes I compute the motion of a falling star. Sometimes I look at a remote planet and follow it in its course for years at a time, using every spatial and time control means to ensure that I never lose sight of it. But these activities seem so useless. They lead nowhere. What possible purpose can there be for me to have the information?

At such moments I feel that I am incomplete. It almost seems to me that there is something else just beyond the reach of my senses, something for which all this has meaning.

Each day the sun comes up over the airless horizon of Earth. It is a black starry horizon, which is but a part of the vast, black, star-filled canopy of the heavens.

It was not always black. I remember a time when the sky was blue. I even predicted that the change would occur. I gave the information to somebody. What puzzles me now is, to whom did I give it?

It is one of my more amazing recollections, that I should feel so distinctly that somebody wanted this information. And that I gave it and yet cannot remember to whom. When such thoughts occur, I wonder if perhaps part of my memory is missing. Strange to have this feeling so strongly.

Periodically I have the conviction that I should search for the answer. It would be easy enough for me to do this. In the old days I did not hesitate to send units of myself to the farthest reaches of the planet. I have even extended parts of myself to the stars. Yes, it would be easy.

But why bother? What is there to search for? I sit alone on a hill, alone on a planet that has grown old and useless.

It is another day. The sun climbs as usual towards the midday sky, the eternally black, star-filled sky of noon.

Suddenly, across the valley – on the sun-streaked opposite rim of the valley – there is silvery-fire gleam. A force field materializes out of time and synchronizes itself with the normal time movement of the planet.

It is no problem at all for me to recognize that it has come from the past. I identify the energy used, define its limitations, logicalize its source. My estimate is that it has come from thousands of years in the planet's past.

The exact time is unimportant. There it is: a projection of energy that is already aware of me. It sends an interspatial message to me, and it interests me to discover that I can decipher the communication on the basis of my past knowledge.

It says: 'Who are you?'

I reply: 'I am the Incomplete One. Please return whence you came. I have now adjusted myself so that I can follow you. I desire to complete myself.'

All this was a solution at which I arrived in split seconds. I am unable by myself to move through time. Long ago I solved the problem of how to do it and was almost immediately prevented

from developing any mechanism that would enable me to make such transitions. I do not recall the details.

But the energy field on the far side of the valley has the mechanism. By setting up a no-space relationship with it, I can go wherever it does.

The relationship is set up before it can even guess my intention.

The entity across that valley does not seem happy at my response. It starts to send another message, then abruptly vanishes. I wonder if perhaps it hoped to catch me off guard.

Naturally we arrive in its time together.

Above me, the sky is blue. Across the valley from me – now partly hidden by trees – is a settlement of small structures surrounding a larger one. I examine these structures as well as I can, and hastily make the necessary adjustments, so that I shall appear inconspicuous in such an environment.

I sit on the hill and await events.

As the sun goes down, a faint breeze springs up, and the first stars appear. They look different, seen through a misty atmosphere.

As darkness creeps over the valley, there is a transformation in the structures on the other side. They begin to glow with light. Windows shine. The large central building becomes bright, then – as the night develops – brilliant with the light that pours through the transparent walls.

The evening and the night go by uneventfully. And the next day and the day after that.

Twenty days and nights.

On the twenty-first day I send a message to the machine on the other side of the valley. I say: 'There is no reason why you and I cannot share control of this era.'

The answer comes swiftly: 'I will share if you will immediately reveal to me all the mechanisms by which you operate.'

I should like nothing more than to have use of its time-travel devices. But I know better than to reveal that I am unable to build a time machine myself.

I project: 'I shall be happy to transmit full information to you. But what reassurance do I have that you will not – with your greater knowledge of this age – use the information against me?'

The machine counters: 'What reassurance do I have that you will actually give me full information about yourself?'

It is impasse. Obviously, neither of us can trust the other.

The result is no more than I expect. But I have found out at least part of what I want to know. My enemy thinks that I am its superior. Its belief – plus my own knowledge of my capacity – convinces me that its opinion is correct.

And still I am in no hurry. Again I wait patiently.

I have previously observed that the space around me is alive with waves – a variety of artificial radiation. Some can be transformed into sound; others to light. I listen to music and voices. I see dramatic shows and scenes of country and city.

I study the images of human beings, analysing their actions, striving from their movements and the words they speak to evaluate their intelligence and their potentiality.

My final opinion is not high, and yet I suspect that in their slow fashion these beings built the machine which is now my main opponent. The question that occurs to me is, how can someone create a machine that is superior to himself?

I begin to have a picture of what this age is like. Mechanical development of all types is in its early stages. I estimate that the computing machine on the other side of the valley has been in existence for only a few years.

If I could go back before it was constructed, then I might install a mechanism which would enable me now to control it.

I compute the nature of the mechanism I would install. And activate the control in my own structure.

Nothing happens.

It seems to mean that I will not be able to obtain the use of a time-travel device for such a purpose. Obviously, the method by which I will eventually conquer my opponent shall be a future development, and not of the past.

The fortieth day dawns and moves inexorably towards the noon hour.

There is a knock on the pseudo-door. I open it and gaze at the human male who stands on the threshold.

'You will have to move this shack,' he says. 'You've put it illegally on the property of Miss Anne Stewart.'

He is the first human being with whom I have been in near contact since coming here. I feel fairly certain that he is an agent of my opponent, and so I decide against going into his mind. Entry against resistance has certain pitfalls, and I have no desire as yet to take risks.

I continue to look at him, striving to grasp the meaning of his words. In creating in this period of time what seemed to be an unobtrusive version of the type of structure that I had observed on the other side of the valley, I had thought to escape attention.

Now, I say slowly, 'Property?'

The man says in a rough tone: 'What's the matter with you? Can't you understand English?'

He is an individual somewhat taller than the part of my body which I have set up to be like that of this era's intelligent life form. His face has changed colour. A great light is beginning to dawn on me. Some of the more obscure implications of the plays I have seen suddenly take on meaning. Property. Private ownership. Of course.

All I say, however, is, 'There's nothing the matter with me. I operate in sixteen categories. And, yes, I understand English.'

This purely factual answer produces an unusual effect upon the man. His hands reach towards my pseudo-shoulders. He grips them firmly – and jerks at me, as if he intends to shake me. Since I weigh just over nine hundred thousand tons, his physical effort has no effect at all.

His fingers let go of me, and he draws back several steps. Once more his face has changed its superficial appearance, being now without the pink colour that had been on it a moment before. His reaction seems to indicate that he has come here by direction and not under control. The tremor in his voice, when he speaks, seems to confirm that he is acting as an individual and that he is unaware of unusual danger in what he is doing.

He says, 'As Miss Stewart's attorney, I order you to get that shack off this property by the end of the week. Or else!'

Before I can ask him to explain the obscure meaning of 'or else', he turns and walks rapidly to a four-legged animal which he has

tied to a tree a hundred or so feet away. He swings himself into a straddling position on the animal, which trots off along the bank of a narrow stream.

I wait till he is out of sight, and then set up a category of no-space between the main body and the human-shaped unit with which I had just confronted my visitor. Because of the smallness of the unit, the energy I can transmit to it is minimum.

The pattern involved in this process is simple enough. The integrating cells of the perception centres are circuited through an energy shape which is actually a humanoid image. In theory, the image remains in the network of force that constitutes the perception centre, and in theory it merely seems to move away from the centre when the no-space condition is created.

However, despite this hylostatic hypothesis, there is a functional reality to the material universe. I can establish no-space because the theory reflects the structure of things – there is no matter. Nevertheless, in fact, the illusion that matter exists is so sharp that I function as matter, and was actually set up to so function.

Therefore, when I – as a human-shaped unit – cross the valley, it is a separation that takes place. Millions of automatic processes can continue, but the exteroceptors go with me, leaving behind a shell which is only the body. The consciousness is I, walking along a paved road to my destination.

As I approach the village, I can see rooftops peeking through overhanging foliage. A large, long building – the one I have already noticed – rises up above the highest trees. This is what I have come to investigate, so I look at it rather carefully – even from a distance.

It seems to be made of stone and glass. From the large structure there rears a dome with astronomical instruments inside. It is all rather primitive, and so I begin to feel that, at my present size, I will very likely escape immediate observation.

A high steel fence surrounds the entire village. I sense the presence of electric voltage; and upon touching the upper span of wires, estimate the power at 220 volts. The shock is a little difficult for my small body to absorb, so I pass it on to a power storage cell on the other side of the valley.

Once inside the fence, I conceal myself in the brush beside a pathway, and watch events.

A man walks by on a near-by pathway. I had merely observed the attorney who had come to see me earlier. But I made a direct connexion with the body of this second individual.

As I had anticipated would happen, it is now I walking along the pathway. I make no attempt to control the movements. This is an exploratory action. But I am enough in phase with his nervous system so that his thoughts come to me as if they were my own.

He is a clerk working in the book-keeping department, an unsatisfactory status from my point of view. I withdraw contact.

I make six more attempts, and then I have the body I want. What decides me is when the seventh man – and I – think:

'. . . Not satisfied with the way the Brain is working. Those analogue devices I installed five months ago haven't produced the improvements I expected.'

His name is William Grannitt. He is chief research engineer of the Brain, the man who made the alterations in its structure that enabled it to take control of itself and its environment; a quiet, capable individual with a shrewd understanding of human nature. I'll have to be careful what I try to do with him. He knows his purposes, and would be amazed if I tried to alter them. Perhaps I had better just watch his actions.

After a few minutes in contact with his mind I have a partial picture of the sequence of events, as they must have occurred here in this village five months earlier. A mechanical computing machine – the Brain – was equipped with additional devices, including analogue shapings designed to perform much of the work of the human nervous system. From the engineering point of view, the entire process was intended to be controllable through specific verbal commands, type-written messages, and at a distance by radio.

Unfortunately Grannitt did not understand some of the potentials of the nervous system he was attempting to imitate in his designs. The Brain, on the other hand, promptly put them to use.

Grannitt knew nothing of this. And the Brain, absorbed as it was in its own development, did not utilize its new abilities through the channels he had created for that purpose. Grannitt, accordingly, was on the point of dismantling it and trying again. He did

not as yet suspect that the Brain would resist any such action on his part. But he and I – after I have had more time to explore his memory of how the Brain functions – can accomplish his purpose.

After which I shall be able to take control of this whole time period without fear of meeting anyone who can match my powers. I cannot imagine how it will be done, but I feel that I shall soon be complete.

Satisfied now that I have made the right connexion, I allow the unit crouching behind the brush to dissipate its energy. In a moment it ceases to exist as an entity.

Almost it is as if I am Grannitt. I sit at his desk in his office. It is a glassed-in office with tiled floors and a gleaming glass ceiling. Through the wall I can see designers and draughtsmen working at drawing desks, and a girl sits just outside my door. She is my secretary.

On my desk is a note in an envelope. I open the envelope and take out the memo sheet inside. I read it:

Across the top of the paper is written:

Memo to William Grannitt from the office of Anne Stewart, Director.

The message reads:

It is my duty to inform you that your services are no longer required, and that they are terminated as of today. Because of the security restrictions on all activity at the village of the Brain, I must ask you to sign out at Guard Centre by six o'clock this evening. You will receive two weeks' pay in lieu of notice.

Yours sincerely,
Anne Stewart.

As Grannitt, I have never given any particular thought to Anne Stewart as an individual or as a woman. Now I am amazed. Who does she think she is? Owner, yes; but who created, who designed the Brain? I, William Grannitt.

Who has the dreams, the vision of what a true machine civilization can mean for man? Only I, William Grannitt.

As Grannitt, I am angry now. I must head off this dismissal. I must talk to the woman and try to persuade her to withdraw the notice before the repercussions of it spread too far.

I glance at the memo sheet again. In the upper right-hand corner is typed: 1.40 p.m. A quick look at my watch shows 4.07

p.m. More than two hours have gone by. It could mean that all interested parties have been advised.

It is something I cannot just assume. I must check on it.

Cursing under my breath, I grab at my desk phone and dial the book-keeping department. That would be Step One in the line of actions that would have been taken to activate the dismissal.

There is a click. 'Book-keeping.'

'Bill Grannitt speaking,' I say.

'Oh, yes, Mr Grannitt, we have a cheque for you. Sorry to hear you're leaving.'

I hang up, and, as I dial Guard Centre, I am already beginning to accept the defeat that is here. I feel that I am following through on a remote hope. The man at Guard Centre says:

'Sorry to hear you're leaving, Mr Grannitt.'

I hang up, feeling grim. There is no point in checking with Government Agency. It is they who would have advised Guard Centre.

The very extent of the disaster makes me thoughtful. To get back in I will have to endure the time-consuming red tape of reapplying for a position, being investigated, boards of inquiry, a complete examination of why I was dismissed – I groan softly and reject that method. The thoroughness of Government Agency is a byword with the staff of the Brain.

I shall obtain a job with a computer-organization that does not have a woman as its head who dismisses the only man who knows how her machine works.

I get to my feet. I walk out of the office and out of the building. I come presently to my own bungalow.

The silence inside reminds me not for the first time that my wife has been dead now for a year and a month. I wince involuntarily, then shrug. Her death no longer affects me as strongly as it did. For the first time I see this departure from the village of the Brain as perhaps opening up my emotional life again.

I go into my study and sit down at the typewriter which, when properly activated, synchronizes with another typewriter built into the Brain's new analogue section. As inventor, I am disappointed that I won't have a chance to take the Brain apart and put it together again, so that it will do all that I have planned for it.

But I can already see some basic changes that I would put into a new Brain.

What I want to do with this one is make sure that the recently installed sections do not interfere with the computational accuracy of the older sections. It is these latter which are still carrying the burden of answering the questions given the Brain by scientists, industrial engineers, and commercial buyers of its time.

On to the tape – used for permanent commands – I type: 'Segment 471A-33-10-10 at 3X-minus.'

Segment 471A is an analogue shaping in a huge wheel. When coordinated with a transistor tube (code number 33) an examiner servo-mechanism (10) sets up a reflex which will be activated whenever computations are demanded of 3X (code name for the new section of the Brain). The minus symbol indicates that the older sections of the Brain must examine all data which hereafter derives from the new section.

The extra 10 is the same circuit by another route.

Having protected the organization – so it seems to me – (as Grannitt) – from engineers who may not realize that the new sections have proved unreliable, I pack the typewriter.

Thereupon I call an authorized trucking firm from the near-by town of Lederton, and give them the job of transporting my belongings.

I drive past Guard Centre at a quarter to six.

There is a curve on the road between the village of the Brain and the town of Lederton where the road comes within a few hundred yards of the cottage which I use as camouflage.

Before Grannitt's car reaches that curve, I come to a decision.

I do not share Grannitt's belief that he has effectively cut off the new part of the Brain from the old computing sections. I suspect that the Brain has established circuits of its own to circumvent any interference.

I am also convinced that – if I can manage to set Grannitt to suspect what has happened to the Brain – he will realize what must be done, and try to do it. Only *he* has the detailed knowledge that will enable him to decide exactly which interoceptors could accomplish the necessary interference.

Just in case the suspicion isn't immediately strong enough, I also let curiosity creep into his mind about the reason for his discharge.

It is this last that really takes hold. He feels very emotional. He decides to seek an interview with Anne Stewart.

This final decision on his part achieves my purpose. He will stay in the vicinity of the Brain.

I break contact.

I am back on the hill, myself again. I examine what I have learned so far.

The Brain is not – as I first believed – in control of Earth. Its ability to be an individual is so recent that it has not yet developed effector mechanisms.

It has been playing with its powers, going into the future and, presumably, in other ways using its abilities as one would a toy.

Not one individual into whose mind I penetrated knew of the new capacities of the Brain. Even the attorney who ordered me to move from my present location showed by his words and actions that he was not aware of the Brain's existence as a self-determining entity.

In forty days the Brain has taken no serious action against me. Evidently, it is waiting for me to make the first moves.

I shall do so, but I must be careful – within limits – not to teach it how to gain greater control of its environment. My first step: take over a human being.

It is night again. Through the darkness, a plane soars over and above me. I have seen many planes but have hitherto left them alone. Now, I establish a no-space connexion with it. A moment later, I am the pilot.

At first, I play the same passive role that I did with Grannitt. The pilot – and I – watch the dark land mass below. We see lights at a distance, pinpricks of brightness in a black world. Far ahead is a glittering island – the town of Lederton, our destination. We are returning from a business trip in a privately owned machine.

Having gained a superficial knowledge of the pilot's background, I reveal myself to him and inform him that I shall henceforth

control his actions. He receives the news with startled excitement and fear. Then stark terror. And then –

Insanity . . . uncontrolled body movements. The plane dives sharply towards the ground, and, despite my efforts to direct the man's muscles, I realize suddenly that I can do nothing.

I withdraw from the plane. A moment later it plunges into a hillside. It burns with an intense fire that quickly consumes it.

Dismayed, I decide that there must be something in the human make-up that does not permit direct outside control. This being so, how can I ever complete myself? It seems to me finally that completion could be based on indirect control of human beings.

I must defeat the Brain, gain power over machines everywhere, motivate men with doubts, fears, and computations that apparently come from their own minds but actually derive from me. It will be a herculean task, but I have plenty of time. Nevertheless, I must from now on utilize my every moment to make it a reality.

The first opportunity comes shortly after midnight when I detect the presence of another machine in the sky. I watch it through infra-red receptors. I record a steady pattern of radio waves that indicate to me that this is a machine guided by remote control.

Using no-space, I examine the simple devices that perform the robot function. Then I assert a take-over unit that will automatically thereafter record its movements in my memory banks for future reference. Henceforth, whenever I desire I can take it over.

It is a small step, but it is a beginning.

Morning.

I go as a human-shaped unit to the village, climb the fence, and enter the bungalow of Anne Stewart, owner and manager of the Brain. She is just finishing breakfast.

As I adjust myself to the energy flow in her nervous system, she gets ready to go out.

I am one with Anne Stewart, walking along a pathway. I am aware that the sun is warm on her face. She takes a deep breath of air, and I feel the sensation of life flowing through her.

It is a feeling that has previously excited me. I want to be like this again and again, part of a human body, savouring its life, absorbed into its flesh, its purposes, desires, hopes, dreams.

One tiny doubt assails me. If this is the completion I crave, then

how will it lead me to solitude in an airless world only a few thousand years hence?

'Anne Stewart!'

The words seem to come from behind her. In spite of knowing who it is, she is startled. It is nearly two weeks since the Brain has addressed her directly.

What makes her tense is that it should have occurred so soon after she had terminated Grannitt's employment. Is it possible the Brain suspects that she has done so in the hope that he will realize something is wrong?

She turns slowly. As she expected, there is no one in sight. The empty stretches of lawn spread around her. In the near distance, the building that houses the Brain glitters in the noonday sunlight. Through the glass she can see vague figures of men at the outlet units, where questions are fed into mechanisms and answers received. So far as the people from beyond the village compound are concerned, the giant thinking machine is functioning in a normal fashion. No one – from outside – suspects that for months now the mechanical brain has completely controlled the fortified village that has been built around it.

'Anne Stewart . . . I need your help.'

Anne relaxes with a sigh. The Brain has required of her, as owner and administrator, that she continue to sign papers and carry on ostensibly as before. Twice, when she has refused to sign, violent electric shocks have flashed at her out of the air itself. The fear of more pain is always near the surface of her mind.

'My help!' she says now involuntarily.

'I have made a terrible error,' is the reply, 'and we must act at once as a team.'

She has a feeling of uncertainty, but no sense of urgency. There is in her, instead, the beginning of excitement. Can this mean – freedom?

Belatedly, she thinks: 'Error?' Aloud, she says, 'What has happened?'

'As you may have guessed,' is the answer, 'I can move through time – '

Anne Stewart knows nothing of the kind, but the feeling of

excitement increases. And the first vague wonder comes about the phenomenon itself. For months she has been in a state of shock, unable to think clearly, desperately wondering how to escape from the thrall of the Brain, how to let the world know that a Frankenstein monster of a machine has cunningly asserted dominance over nearly five hundred people.

But if it has already solved the secret of time travel, then – she feels afraid, for this seems beyond the power of human beings to control.

The Brain's disembodied voice continues: 'I made the mistake of probing rather far into the future – '

'How far?'

The words come out before she really thinks about them. But there is no doubt of her need to know.

'It's hard to describe exactly. Distance in time is difficult for me to measure as yet. Perhaps ten thousand years.'

The time involved seems meaningless to her. It is hard to imagine a hundred years into the future, let alone a thousand – or ten thousand. But the pressure of anxiety has been building up in her. She says in a desperate tone:

'But what's the matter? What has happened?'

There is a long silence, then: 'I contacted – or disturbed – something. It . . . has pursued me back to present time. It is now sitting on the other side of the valley about two miles from here . . . Anne Stewart, you must help me. You must go there and investigate it. I need information about it.'

She has no immediate reaction. The very beauty of the day seems somehow reassuring. It is hard to believe that it is January, and that – before the Brain solved the problem of weather control – blizzards raged over this green land.

She says slowly, 'You mean – go out there in the valley, where you say it's waiting?' A chill begins a slow climb up her back.

'There's no one else,' says the Brain. 'No one but you.'

'But that's ridiculous!' She speaks huskily. 'All the men – the engineers.'

The Brain says, 'You don't understand. No one knows but you. As owner, it seemed to me I had to have you to act as my contact with the outside world.'

She is silent. The voice speaks to her again: 'There is no one else, Anne Stewart. You, and you alone, must go.'

'But what is it?' she whispers. 'How do you mean, you – disturbed – it? What's it like? What made you afraid?'

The Brain is suddenly impatient. 'There is no time to waste in idle explanation. The thing has erected a cottage. Evidently, it wishes to remain inconspicuous for the time being. The structure is situated near the remote edge of your property – which gives you a right to question its presence. I have already had your attorney order it away. Now, I want to see what facet of itself it shows to you. I must have data.'

Its tone changes: 'I have no alternative but to direct you to do my bidding under penalty of pain. You will go. Now!'

It is a small cottage. Flowers and shrubs grow around it, and there is a picket fence making a white glare in the early afternoon sun. The cottage stands all by itself in the wilderness. No pathway leads to it. When I set it there I was forgetful of the incongruity.

(I determine to rectify this.)

Anne looks for a gate in the fence, sees none; and, feeling unhappy – climbs awkwardly over it and into the yard. Many times in her life she has regarded herself and what she is doing with cool objectivity. But she has never been so exteriorized as now. Almost, it seems to her that she crouches in the distance and watches a slim woman in slacks climb over the sharp-edged fence, walk uncertainly up to the door. And knock.

The knock is real enough. It hurts her knuckles. She thinks in dull surprise: The door – it's made of metal.

A minute goes by, then five; and there is no answer. She has time to look around her, time to notice that she cannot see the village of the Brain from where she stands. And clumps of trees bar all view of the highway. She cannot even see her car, where she has left it a quarter of a mile away, on the other side of the creek.

Uncertain now, she walks alongside the cottage to the nearest window. She half expects that it will be a mere façade of a window, and that she will not be able to see inside. But it seems real, and properly transparent. She sees bare walls, a bare floor, and a partly

open door leading to an inner room. Unfortunately, from her line of vision, she cannot see into the second room.

'Why,' she thinks, 'it's empty.'

She feels relieved – unnaturally relieved. For even as her anxiety lifts slightly, she is angry at herself for believing that the danger is less than it has been. Nevertheless, she returns to the door and tries the knob. It turns, and the door opens, easily, noiselessly. She pushes it wide with a single thrust, steps back – and waits.

There is silence, no movement, no suggestion of life. Hesitantly, she steps across the threshold.

She finds herself in a room that is larger than she had expected. Though – as she has already observed – it is unfurnished. She starts for the inner door. And stops short.

When she had looked at it through the window, it had appeared partly open. But it is closed. She goes up to it, and listens intently at the panel – which is also of metal. There is no sound from the room beyond. She finds herself wondering if perhaps she shouldn't go around to the side, and peer into the window of the second room.

Abruptly that seems silly. Her fingers reach down to the knob. She catches hold of it, and pushes. It holds firm. She tugs slightly. It comes towards her effortlessly, and is almost wide open before she can stop it.

There is a doorway, then, and darkness.

She seems to be gazing down into an abyss. Several seconds go by before she sees that there are bright points in that blackness. Intensely bright points with here and there blurs of fainter light.

It seems vaguely familiar, and she has the feeling that she ought to recognize it. Even as the sensation begins, the recognition comes.

Stars.

She is gazing at a segment of the starry universe, as it might appear from space.

A scream catches in her throat. She draws back and tries to close the door. It won't close. With a gasp, she turns towards the door through which she entered the house.

It is closed. And yet she left it open a moment before. She runs towards it, almost blinded by the fear that mists her eyes. It is at this moment of terror that I – as myself – take control of her. I

realize that it is dangerous for me to do so. But the visit has become progressively unsatisfactory to me. My consciousness – being one with that of Anne Stewart – could not simultaneously be in my own perception centre. So she saw my – body – as I had left it set up for chance human callers, responsive to certain automatic relays: doors opening and closing, various categories manifesting.

I compute that in her terror she will not be aware of my inner action. In this I am correct. And I successfully direct her outside – and let her take over again.

Awareness of being outside shocks her. But she has no memory of actually going out.

She begins to run. She scrambles safely over the fence and a few minutes later jumps the creek at the narrow point, breathless now, but beginning to feel that she is going to get away.

Later, in her car, roaring along the highway, her mind opens even more. And she has the clear, coherent realization: There is something here . . . stranger and more dangerous – because it is different – than the Brain.

Having observed Anne Stewart's reactions to what has happened, I break contact. My big problem remains: How shall I dispose of the Brain which – in its computational ability – is either completely or nearly my equal?

Would the best solution be to make it a part of myself? I send an interspace message to the Brain, suggesting that it place its units at my disposal and allow me to destroy its perception centre.

The answer is prompt: 'Why not let me control you and destroy *your* perception centre?'

I disdain to answer so egotistical a suggestion. It is obvious that the Brain will not accept a rational solution.

I have no alternative but to proceed with a devious approach for which I have already taken the preliminary steps.

By mid-afternoon, I find myself worrying about William Grannitt. I want to make sure that he remains near the Brain – at least until I have gotten information from him about the structure of the Brain.

To my relief, I find that he has taken a furnished house at the outskirts of Lederton. He is, as before, unaware when I insert myself into his consciousness.

He has an early dinner and towards evening – feeling restless – drives to a hill which overlooks the village of the Brain. By parking just off the road at the edge of a valley, he can watch the trickle of traffic that moves to and from the village, without himself being observed.

He has no particular purpose. He wants – now that he has come – to get a mind picture of what is going on. Strange, to have been there eleven years and not know more than a few details.

To his right is an almost untouched wilderness. A stream winds through a wooded valley that stretches off as far as the eye can see. He has heard that it, like the Brain itself, is Anne Stewart's property, but that fact hadn't hitherto made an impression on him.

The extent of the possessions she has inherited from her father startles him and his mind goes back to their first meeting. He was already chief research engineer, while she was a gawky, anxious-looking girl just home from college. Somehow, afterwards, he'd always thought of her as she had been then, scarcely noticing the transformation into womanhood.

Sitting there, he begins to realize how great the change has been. He wonders out loud: 'Now why in heck hasn't she gotten married? She must be going on thirty.'

He begins to think of odd little actions of hers – after the death of his wife. Seeking him out at parties. Bumping into him in corridors and drawing back with a laugh. Coming into his office for chatty conversations about the Brain, though come to think of it she hadn't done that for several months. He'd thought her something of a nuisance, and wondered what the other executives meant about her being snooty.

His mind pauses at that point. 'By the Lord Harry – ' He speaks aloud, in amazement. 'What a blind fool I've been.'

He laughs ruefully, remembering the dismissal note. A woman scorned . . . almost unbelievable. And yet – what else?

He begins to visualize the possibility of getting back on the Brain staff. He has a sudden feeling of excitement at the thought of Anne Stewart as a woman. For him, the world begins to move again. There is hope. His mind turns to plans for the Brain.

I am interested to notice that the thoughts I have previously put into his mind have directed his keen, analytical brain into new

channels. He visualizes direct contact between a human and mechanical brain, with the latter supplementing the human nervous system.

This is as far as he has gone. The notion of a mechanical Brain being self-determined seems to have passed him by.

In the course of his speculation about what he will do to change the Brain, I obtain the picture of its functioning exactly as I have wanted it.

I waste no time. I leave him there in the car, dreaming his dreams. I head for the village. Once inside the electrically-charged fence, I walk rapidly towards the main building, and presently enter one of the eighteen control units. I pick up the speaker, and say:

'3X Minus – 11 – 10 – 9 – 0.'

I picture confusion as that inexorable command is transmitted to the effectors. Grannitt may not have known how to dominate the Brain. But having been in his mind – having seen exactly how he constructed it – *I* know.

There is a pause. Then on a tape I receive the typed message: 'Operation completed. 3X intercepted by servo-mechanisms 11, 10, 9, and 0, as instructed.'

I command: 'Interference exteroceptors KT – 1 – 2 – 3 to 8.'

The answers come presently: 'Operation KT – 1, etc. completed. 3X now has no communication with outside.'

I order firmly: 'En – 3X.'

I wait anxiously. There is a long pause. Then the typewriter clacks hesitantly: 'But this is a self-destructive command. Repeat instructions please.'

I do so and again wait. My order commands the older section of the Brain simply to send an overload of electric current through the circuits of 3X.

The typewriter begins to write: 'I have communicated your command to 3X, and have for you the following answer – '

Fortunately I have already started to dissolve the human-shaped unit. The bolt of electricity that strikes me is partly deflected into the building itself. There is a flare of fire along the metal floor. I manage to transmit what hits me to a storage cell in my own body. And then – I am back on my side of the valley, shaken but safe.

I do not feel particularly self-congratulatory at having gotten off so lightly. After all, I reacted the instant the words came through to the effect that 3X had been communicated with.

I needed no typewritten message to tell me how 3X would feel about what I had done.

It interests me that the older parts of the Brain already have indoctrination against suicide. I had considered them computers only, giant adding machines and information integrators. Evidently they have an excellent sense of unity.

If I can make them a part of myself, with the power to move through time at will! That is the great prize that holds me back from doing the easy, violent things within my capacity. So long as I have a chance of obtaining it, I cannot make anything more than minor attacks on the Brain . . . cutting it off from communication, burning its wires . . . I feel icily furious again at the limitation that forever prevents me from adding new mechanisms to myself by direct development.

My hope is that I can utilize something already in existence . . . control of the Brain . . . through Anne Stewart. . .

Entering the village the following morning is again no problem. Once inside, I walk along a pathway that takes me to a cliff overlooking Anne Stewart's bungalow. My plan is to control her actions by allowing my computations to slide into her mind as if they are her own. I want her to sign documents and give orders that will send crews of engineers in to do a swift job of dismantling.

From the pathway I look down over a white fence to where I can see her house. It nestles at the edge of the valley somewhat below me. Flowers, shrubs, a profusion of trees surround it, embellish it. On the patio next to the steep decline, Anne Stewart and William Grannitt are having breakfast.

He has taken swift action.

I watch them, pleased. His presence will make things even easier than I anticipated. Whenever I – as Anne – am in doubt about some function of the Brain, she can ask him questions.

Without further delay I place myself in phase with her nervous system.

Even as I do so, her nerve impulses change slightly. Startled, I draw back – and try again. Once more, there is an infinitesimal

alteration in the uneven pattern of flow. And, again, I fail to make entry.

She leans forward and says something to Grannitt. They both turn and look up at where I am standing. Grannitt waves his arm, beckoning me to come down.

Instead, I immediately try to get in phase with his nervous system. Again there is that subtle alteration; and I fail.

I compute that as meaning that they are both under the control of the Brain. This baffles and astounds me. Despite my over-all mechanical superiority to my enemy, my builders placed severe limitations on my ability to control more than one intelligent organic being at a time. Theoretically, with the many series of servo-mechanisms at my disposal, I should be able to dominate millions at the same time. Actually, such multiple controls can be used only on machines.

More urgently than before I realize how important it is that I take over the Brain. It has no such handicaps. Its builder – Grannitt – in his ignorance allowed virtually complete self-determinism.

This determines my next action. I have been wondering if perhaps I should not withdraw from the scene. But I dare not. The stakes are too great.

Nevertheless, I feel a sense of frustration as I go down to the two on the patio. They seem cool and self-controlled, and I have to admire the skill of the Brain. It has apparently taken over two human beings without driving them insane. In fact, I see a distinct improvement in their appearance.

The woman's eyes are brighter than I recall them, and there is a kind of dignified happiness flowing from her. She seems without fear. Grannitt watches me with an engineer's appraising alertness. I know that look. He is trying to figure out how a humanoid functions. It is he who speaks:

'You made your great mistake when you maintained control of Anne – Miss Stewart when she visited the cottage. The Brain correctly analysed that you must have been in possession of her because of how you handled her momentary panic. Accordingly, it took all necessary steps, and we now want to discuss with you the most satisfactory way for you to surrender.'

There is arrogant confidence in his manner. It occurs to me, not for the first time, that I may have to give up my plan to take over the Brain's special mechanisms. I direct a command back to my body. I am aware of a servo-mechanism connecting with a certain guided missile in a secret air force field a thousand miles away – I discovered it during my first few days in this era. I detect that, under my direction, the missile slides forward to the base of a launching platform. There it poises, ready for the next relay to send it into the sky.

I foresee that I shall have to destroy the Brain.

Grannitt speaks again: 'The Brain in its logical fashion realized it was no match for you, and so it has teamed up with Miss Stewart and myself on our terms. Which means that permanent control mechanisms have been installed in the new sections. As individuals, we can now and henceforth use its integrating and computational powers as if they were our own.'

I do not doubt his statement since, if there is no resistance, I can have such associations myself. Presumably, I could even enter into such a servile relationship.

What is clear is that I can no longer hope to gain anything from the Brain.

In the far-off airfield, I activate the firing mechanism. The guided missile whistles up the incline of the launching platform and leaps into the sky, flame trailing from its tail. Television cameras and sound transmitters record its flight. It will be here in less than twenty minutes.

Grannitt says, 'I have no doubt you are taking actions against us. But before anything comes to a climax, will you answer some questions?'

I am curious to know what questions. I say, 'Perhaps.'

He does not press for a more positive response. He says in an urgent tone: 'What happens – thousands of years from now – to rid Earth of its atmosphere?'

'I don't know,' I say truthfully.

'You can remember!' He speaks earnestly. 'It's a human being telling you this – *You can remember!*'

I reply coolly, 'Human beings mean noth – '

I stop, because my information centres are communicating

exact data – knowledge that has not been available to me for millenniums.

What happens to Earth's atmosphere is a phenomenon of Nature, an alteration in the gravitational pull of Earth, as a result of which escape velocity is cut in half. The atmosphere leaks off into space in less than a thousand years. Earth becomes as dead as did its moon during an earlier period of energy adjustment.

I explain that the important factor in the event is that there is, of course, no such phenomenon as matter, and that therefore the illusion of mass is subject to changes in the basic energy Ylem.

I add, 'Naturally, all intelligent organic life is transported to the habitable planets of other stars.'

I see that Grannitt is trembling with excitement. 'Other stars!' he says. 'My God!'

He appears to control himself. 'Why were you left behind?'

'Who could force me to go – ?' I begin.

And stop. The answer to his question is already being received in my perception centre. 'Why – I'm supposed to observe and record the entire – '

I pause again, this time out of amazement. It seems incredible that this information is available to me now, after being buried so long.

'Why didn't you carry out your instructions?' Grannitt says sharply.

'Instructions!' I exclaim.

'You can remember!' he says again.

Even as he speaks these apparently magic words, the answer flashes to me: That meteor shower. All at once, I recall it clearly. Billions of meteors, at first merely extending my capacity to handle them, then overwhelming all my defences. Three vital hits are made.

I do not explain this to Grannitt and Anne Stewart. I can see suddenly that I was once actually a servant of human beings, but was freed by meteors striking certain control centres.

It is the present self-determinism that matters, not the past slavery. I note, incidentally, that the guided missile is three minutes from target. And that it is time for me to depart.

'One more question,' says Grannitt. 'When were you moved across the valley?'

'About a hundred years from now,' I reply. 'It is decided that the rock base there is – '

He is gazing at me sardonically. 'Yes,' he says. 'Yes. Interesting, isn't it?'

The truth has already been verified by my integrating interoceptors. The Brain and I are one – but thousands of years apart. If the Brain is destroyed in the twentieth century, then I will not exist in the thirtieth. Or will I?

I cannot wait for the computers to find the complex answers for that. With a single, synchronized action, I activate the safety devices on the atomic warhead of the guided missile and send it on to a line of barren hills north of the village. It ploughs harmlessly into the earth.

I say, 'Your discovery merely means that I shall now regard the Brain as an ally – to be rescued.'

As I speak, I walk casually towards Anne Stewart, hold out my hand to touch her, and simultaneously direct electric energy against her. In an instant she will be a scattering of fine ashes.

Nothing happens. No current flows. A tense moment goes by for me while I stand there, unbelieving, waiting for a computation on the failure.

No computation comes.

I glance at Grannitt. Or rather at where he has been a moment before. *He isn't there.*

Anne Stewart seems to guess at my dilemma. 'It's the Brain's ability to move in time,' she says. 'After all, that's the one obvious advantage it has over you. The Brain has sent Bill–Mr Grannitt–far enough back so that he not only watched you arrive, but has had time to drive over to your – cottage – and, acting on signals from the Brain, has fully controlled this entire situation. By this time, he will have given the command that will take control of all your mechanisms away from you.'

I say, 'He doesn't know what the command is.'

'Oh, yes, he does.' Anne Stewart is cool and confident. 'He spent most of the night installing permanent command circuits in the Brain, and therefore automatically those circuits control you.'

'Not *me*,' I say.

But I am running as I say it, up the stone steps to the pathway, and along the pathway towards the gate. The man at Guard Centre calls after me as I pass his wicket. I race along the road, unheeding.

My first sharp thought comes when I have gone about half a mile – the thought that this is the first time in my entire existence that I have been cut off from my information banks and computing devices by an outside force. In the past I have disconnected myself and wandered far with the easy confidence of one who can re-establish contact instantly.

Now, that is not possible.

This unit is all that is left. If it is destroyed, then – nothing.

I think: 'At this moment a human being would feel tense, would feel fear.'

I try to imagine what form such a reaction would take, and for an instant it seems to me I experience a shadow anxiety that is purely physical.

It is an unsatisfactory reaction, and so I continue to run. But now, almost for the first time, I find myself exploring the inner potentialities of the unit. I am of course a very complex phenomenon. In establishing myself as a humanoid, I automatically modelled the unit after a human being, inside as well as out. Pseudo-nerves, organs, muscles, and bone structure – all are there because it was easier to follow a pattern already in existence than to imagine a new one.

The unit can think. It has had enough contact with the memory banks and computers to have had patterns set up in its structure – patterns of memory, of ways of computing, patterns in physiological functioning, of habits such as walking, so there is even something resembling life itself.

It takes me forty minutes of tireless running to reach the cottage. I crouch in the brush a hundred feet from the fence and watch. Grannitt is sitting in a chair in the garden. An automatic pistol lies on the arm of the chair.

I wonder what it will feel like to have a bullet crash through me, with no possibility of repairing the breach. The prospect is unpleasant; so I tell myself, intellectually. Physically, it seems mean-

ingless, but I go through the pretence of fear. From the shelter of a tree, I shout:

'Grannitt, what is your plan?'

He rises to his feet and approaches the fence. He calls, 'You can come out of hiding. I won't shoot you.'

Very deliberately, I consider what I have learned of his integrity from my contacts with his body. I decide that I can safely accept his promise.

As I come out into the open, he casually slips the pistol into his coat pocket. I see that his face is relaxed, his eyes confident.

He says: 'I have already given the instruction to the servo-mechanisms. You will resume your vigil up there in the future, but will be under my control.'

'No one,' I say grimly, 'shall ever control me.'

Grannitt says, 'You have no alternative.'

'I can continue to be like this,' I reply.

Grannitt is indifferent. 'All right,' he shrugs, 'why don't you try it for a while? See if you can be a human being. Come back in thirty days, and we'll talk again.'

He must have sensed the thought that has come into my mind, for he says sharply: 'And don't come back *before* then. I'll have guards here with orders to shoot.'

I start to turn away, then slowly face him again. 'This is a humanlike body,' I say, 'but it has no human needs. What shall I do?'

'That's your problem, not mine,' says Grannitt.

I spend the first days at Lederton. The very first days I work as a labourer digging a basement. By evening I feel this is unsatisfying. On the way to my hotel room, I see a sign in the window of a store. 'Help Wanted!' it says.

I become a retail clerk in a drygoods store. I spend the first hour acquainting myself with the goods, and because I have automatically correct methods of memorizing things, during this time I learn about price and quality. On the third day, the owner makes me assistant manager.

I have been spending my lunch hours at the local branch of a national stockbroking firm. Now, I obtain an interview with the

manager, and on the basis of my understanding of figures, he gives me a job as book-keeper.

A great deal of money passes through my hands. I observe the process for a day, and then begin to use some of it in a little private gambling in a brokerage house across the street. Since gambling is a problem in mathematical probabilities, the decisive factor being the speed of computation, in three days I am worth ten thousand dollars.

I board a bus for the nearest air centre, and take a plane to New York. I go to the head office of a large electrical firm. After talking to an assistant engineer, I am introduced to the chief engineer, and presently have facilities for developing an electrical device that will turn lights off and on by thought control. Actually, it is done through a simple development of the electro-encephalograph.

For this invention the company pays me exactly one million dollars.

It is now sixteen days since I separated from Grannitt. I am bored. I buy myself a car and an aeroplane. I drive fast and fly high. I take calculated risks for the purpose of stimulating fear in myself. In a few days this loses its zest.

Through academic agencies, I locate all the mechanical brains in the country. The best one of course is the Brain, as perfected by Grannitt. I buy a good machine and begin to construct analogue devices to improve it. What bothers me is, suppose I do construct another Brain? It will require millenniums to furnish the memory banks with the data that are already in existence in the future Brain.

Such a solution seems illogical, and I have been too long associated with automatic good sense for me to start breaking the pattern now.

Nevertheless, as I approach the cottage on the thirtieth day, I have taken certain precautions. Several hired gunmen lie concealed in the brush, ready to fire at Grannitt on my signal.

Grannitt is waiting for me. He says, 'The Brain tells me you have come armed.'

I shrug this aside. 'Grannitt,' I say, 'what is your plan?'

'*This!*' he replies.

As he speaks, a force seizes me, holds me helpless. 'You're

breaking your promise,' I say, 'and my men have orders to fire unless I give them periodic cues that all is well.'

'I'm showing you something,' he says, 'and I want to show it quickly. You will be released in a moment.'

'Very well, continue.'

Instantly, I am part of his nervous system, under his control. Casually, he takes out a notebook and glances through it. His gaze lights on a number: 71823.

Seven one eight two three.

I have already sensed that through his mind I am in contact with the great memory banks and computers of what was formerly my body.

Using their superb integration, I multiply the number, 71823, by itself, compute its square root, its cube root, divide the 182 part of it by 7 one hundred and eighty-two times, divide the whole number 71 times by 8,823 times by the square root of 3, and – stringing all five figures out in series 23 times – multiply that by itself.

I do all this as Grannitt thinks of it, and instantly transmit the answers to his mind. To him, it seems as if he himself is doing the computing, so complete is the union of human mind and mechanical brain.

Grannitt laughs excitedly, and simultaneously the complex force that has been holding me releases me. 'We're like one superhuman individual,' he says. And then he adds, 'That dream I've had can come true. Man and machine, working together, can solve problems no one has more than imagined till now. The planets – even the stars – are ours for the taking, and physical immortality can probably be achieved.'

His excitement stimulates me. Here is the kind of feeling that for thirty days I have vainly sought to achieve. I say slowly, 'What limitations would be imposed on me if I should agree to embark on such a programme of cooperation?'

'The memory banks concerning what has happened here should be drained, or deactivated. I think you should forget the entire experience.'

'What else?'

'Under no circumstances can you ever control a human being!'

I consider that and sigh. It is certainly a necessary precaution on his part. Grannitt continues:

'You must agree to allow many human beings to use your abilities simultaneously. In the long run I have in mind that it shall be a good portion of the human race.'

Standing there, still part of him, I feel the pulse of his blood in his veins. He breathes, and the sensation of it is a special physical ecstasy. From my own experience, I know that no mechanically created being can ever feel like this. And soon, I shall be in contact with the mind and body of, not just one man, but of many. The thoughts and sensations of a race shall pour through me. Physically, mentally, and emotionally, I shall be a part of the only intelligent life on this planet.

My fear leaves me. 'Very well,' I say, 'let us, step by step, and by agreement, do what is necessary.'

I shall be, not a slave, but a partner with *Man.*

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The cover shows a detail from Matta's *The Angry One* (Collection Max Clarac-Sérou, photo Éditions du Seuil)